SEQUENCE LISTING

<110> F. Hoffmann-La Roche AG

<120> Use of a cathepsin S inhibitor against the formation of anti-drug antibodies

<130> P35022-WO

<150> EP18195251.6
<151> 2018-09-18

<160> 6

<170> PatentIn version 3.5

<210> 1
<211> 816
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic construct

<400> 1

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 Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Gly Ile Ile Pro Ile Phe Gly Thr Ala Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Ile Thr Ala Asp Lys 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 Glu Tyr Tyr Arg Gly Pro Tyr Asp Tyr Trp Gly Gln Gly Thr
100 105 110

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

115 120 125

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

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

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

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

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

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

Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly
225 230 235 240

Ala Glu Val Lys Lys Pro Gly Ser Ser Val Lys Val Ser Cys Lys Ala
245 250 255

Ser Gly Gly Thr Phe Ser Ser Tyr Ala Ile Ser Trp Val Arg Gln Ala
260 265 270

Pro Gly Gln Gly Leu Glu Trp Met Gly Gly Ile Ile Pro Ile Phe Gly
275 280 285

Thr Ala Asn Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Ile Thr Ala
290 295 300

Asp Lys Ser Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser
305 310 315 320

Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Glu Tyr Tyr Arg Gly Pro
325 330 335

Tyr Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser
340 345 350

Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr
355 360 365

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

Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val
385 390 395 400

His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser
405 410 415

Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile
420 425 430

Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val
435 440 445

Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala
450 455 460

Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
465 470 475 480

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
485 490 495

Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val
500 505 510

Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
515 520 525

Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
530 535 540

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala
545 550 555 560

Leu Gly Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro
565 570 575

Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys Arg Asp Glu Leu Thr
580 585 590

Lys Asn Gln Val Ser Leu Trp Cys Leu Val Lys Gly Phe Tyr Pro Ser
595 600 605

Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
610 615 620

Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
625 630 635 640

Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
645 650 655

Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
660 665 670

Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Gly Gly Gly Gly
675 680 685

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Leu
690 695 700

Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser
705 710 715 720

Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr Ala Met Ser Trp Val
725 730 735

Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Ala Ile Ile Gly
740 745 750

Ser Gly Ala Ser Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr
755 760 765

Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser
770 775 780

Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Lys Gly Trp Phe
785 790 795 800

Gly Gly Phe Asn Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
805 810 815

<210> 2
<211> 807
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic construct

<400> 2

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 Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Gly Ile Ile Pro Ile Phe Gly Thr Ala Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Ile Thr Ala Asp Lys 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 Glu Tyr Tyr Arg Gly Pro Tyr Asp Tyr Trp Gly Gln Gly Thr
100 105 110

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

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

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

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

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

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

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

Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly
225 230 235 240

Ala Glu Val Lys Lys Pro Gly Ser Ser Val Lys Val Ser Cys Lys Ala
245 250 255

Ser Gly Gly Thr Phe Ser Ser Tyr Ala Ile Ser Trp Val Arg Gln Ala
260 265 270

Pro Gly Gln Gly Leu Glu Trp Met Gly Gly Ile Ile Pro Ile Phe Gly
275 280 285

Thr Ala Asn Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Ile Thr Ala
290 295 300

Asp Lys Ser Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser
305 310 315 320

Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Glu Tyr Tyr Arg Gly Pro
325 330 335

Tyr Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser
340 345 350

Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr
355 360 365

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

Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val
385 390 395 400

His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser
405 410 415

Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile
420 425 430

Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val
435 440 445

Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala
450 455 460

Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
465 470 475 480

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
485 490 495

Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val
500 505 510

Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
515 520 525

Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
530 535 540

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala
545 550 555 560

Leu Gly Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro
565 570 575

Arg Glu Pro Gln Val Cys Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr

580 585 590

Lys Asn Gln Val Ser Leu Ser Cys Ala Val Lys Gly Phe Tyr Pro Ser
595 600 605

Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
610 615 620

Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Val
625 630 635 640

Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
645 650 655

Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
660 665 670

Ser Leu Ser Leu Ser Pro Gly Gly Gly Gly Gly Ser Gly Gly Gly Gly
675 680 685

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu Thr
690 695 700

Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu
705 710 715 720

Ser Cys Arg Ala Ser Gln Ser Val Thr Ser Ser Tyr Leu Ala Trp Tyr
725 730 735

Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Asn Val Gly Ser
740 745 750

Arg Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly
755 760 765

Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala
770 775 780

Val Tyr Tyr Cys Gln Gln Gly Ile Met Leu Pro Pro Thr Phe Gly Gln
785 790 795 800

Gly Thr Lys Val Glu Ile Lys
805

<210> 3
<211> 214
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic construct

<400> 3

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

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

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

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

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

Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Ser Ser Gln Pro Tyr
85 90 95

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

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

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

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

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser

165 170 175

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

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

Phe Asn Arg Gly Glu Cys
210

<210> 4
<211> 805
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic construct

<400> 4

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

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

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

Gly Arg Met Arg Tyr Asp Gly Asp Thr Tyr Tyr Asn Ser Val Leu Lys
50 55 60

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

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

Arg Asp Gly Arg Gly Asp Ser Phe Asp Tyr Trp Gly Gln Gly Val Met
100 105 110

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

Ala Pro Gly Ser Ala Ala Gln Thr Asn Ser Met Val Thr Leu Gly Cys
130 135 140

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

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

Asp Leu Tyr Thr Leu Ser Ser Ser Val Thr Val Pro Ser Ser Thr Trp
180 185 190

Pro Ser Gln Thr Val Thr Cys Asn Val Ala His Pro Ala Ser Ser Thr
195 200 205

Lys Val Asp Lys Lys Ile Val Pro Arg Asp Cys Gly Gly Gly Gly Ser
210 215 220

Gly Gly Gly Gly Ser Gln Val Gln Leu Lys Glu Ser Gly Pro Gly Leu
225 230 235 240

Val Gln Pro Ser Gln Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Phe
245 250 255

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

Gly Leu Glu Trp Met Gly Arg Met Arg Tyr Asp Gly Asp Thr Tyr Tyr
275 280 285

Asn Ser Val Leu Lys Ser Arg Leu Ser Ile Ser Arg Asp Thr Ser Lys
290 295 300

Asn Gln Val Phe Leu Lys Met Asn Ser Leu Gln Thr Asp Asp Thr Ala
305 310 315 320

Ile Tyr Tyr Cys Thr Arg Asp Gly Arg Gly Asp Ser Phe Asp Tyr Trp
325 330 335

Gly Gln Gly Val Met Val Thr Val Ser Ser Ala Lys Thr Thr Pro Pro

340 345 350

Ser Val Tyr Pro Leu Ala Pro Gly Ser Ala Ala Gln Thr Asn Ser Met
355 360 365

Val Thr Leu Gly Cys Leu Val Lys Gly Tyr Phe Pro Glu Pro Val Thr
370 375 380

Val Thr Trp Asn Ser Gly Ser Leu Ser Ser Gly Val His Thr Phe Pro
385 390 395 400

Ala Val Leu Gln Ser Asp Leu Tyr Thr Leu Ser Ser Ser Val Thr Val
405 410 415

Pro Ser Ser Thr Trp Pro Ser Gln Thr Val Thr Cys Asn Val Ala His
420 425 430

Pro Ala Ser Ser Thr Lys Val Asp Lys Lys Ile Val Pro Arg Asp Cys
435 440 445

Gly Cys Lys Pro Cys Ile Cys Thr Val Pro Glu Val Ser Ser Val Phe
450 455 460

Ile Phe Pro Pro Lys Pro Lys Asp Val Leu Thr Ile Thr Leu Thr Pro
465 470 475 480

Lys Val Thr Cys Val Val Val Ala Ile Ser Lys Asp Asp Pro Glu Val
485 490 495

Gln Phe Ser Trp Phe Val Asp Asp Val Glu Val His Thr Ala Gln Thr
500 505 510

Lys Pro Arg Glu Glu Gln Ile Asn Ser Thr Phe Arg Ser Val Ser Glu
515 520 525

Leu Pro Ile Met His Gln Asp Trp Leu Asn Gly Lys Glu Phe Lys Cys
530 535 540

Arg Val Asn Ser Ala Ala Phe Gly Ala Pro Ile Glu Lys Thr Ile Ser
545 550 555 560

Lys Thr Lys Gly Arg Pro Lys Ala Pro Gln Val Tyr Thr Ile Pro Pro
565 570 575

Pro Lys Lys Gln Met Ala Lys Asp Lys Val Ser Leu Thr Cys Met Ile
580 585 590

Thr Asn Phe Phe Pro Glu Asp Ile Thr Val Glu Trp Gln Trp Asn Gly
595 600 605

Gln Pro Ala Glu Asn Tyr Lys Asn Thr Gln Pro Ile Met Lys Thr Asp
610 615 620

Gly Ser Tyr Phe Val Tyr Ser Lys Leu Asn Val Gln Lys Ser Asn Trp
625 630 635 640

Glu Ala Gly Asn Thr Phe Thr Cys Ser Val Leu His Glu Gly Leu His
645 650 655

Asn His His Thr Glu Lys Ser Leu Ser His Ser Pro Gly Gly Gly Gly
660 665 670

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
675 680 685

Ser Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly
690 695 700

Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser
705 710 715 720

His Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp
725 730 735

Val Ser Ala Ile Trp Ala Ser Gly Glu Gln Tyr Tyr Ala Asp Ser Val
740 745 750

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
755 760 765

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
770 775 780

Ala Lys Gly Trp Leu Gly Asn Phe Asp Tyr Trp Gly Gln Gly Thr Leu
785 790 795 800

Val Thr Val Ser Ser
805

<210> 5
<211> 797
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic construct

<400> 5

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

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

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

Gly Arg Met Arg Tyr Asp Gly Asp Thr Tyr Tyr Asn Ser Val Leu Lys
50 55 60

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

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

Arg Asp Gly Arg Gly Asp Ser Phe Asp Tyr Trp Gly Gln Gly Val Met
100 105 110

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

Ala Pro Gly Ser Ala Ala Gln Thr Asn Ser Met Val Thr Leu Gly Cys
130 135 140

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

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

Asp Leu Tyr Thr Leu Ser Ser Ser Val Thr Val Pro Ser Ser Thr Trp
180 185 190

Pro Ser Gln Thr Val Thr Cys Asn Val Ala His Pro Ala Ser Ser Thr
195 200 205

Lys Val Asp Lys Lys Ile Val Pro Arg Asp Cys Gly Gly Gly Gly Ser
210 215 220

Gly Gly Gly Gly Ser Gln Val Gln Leu Lys Glu Ser Gly Pro Gly Leu
225 230 235 240

Val Gln Pro Ser Gln Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Phe
245 250 255

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

Gly Leu Glu Trp Met Gly Arg Met Arg Tyr Asp Gly Asp Thr Tyr Tyr
275 280 285

Asn Ser Val Leu Lys Ser Arg Leu Ser Ile Ser Arg Asp Thr Ser Lys
290 295 300

Asn Gln Val Phe Leu Lys Met Asn Ser Leu Gln Thr Asp Asp Thr Ala
305 310 315 320

Ile Tyr Tyr Cys Thr Arg Asp Gly Arg Gly Asp Ser Phe Asp Tyr Trp
325 330 335

Gly Gln Gly Val Met Val Thr Val Ser Ser Ala Lys Thr Thr Pro Pro
340 345 350

Ser Val Tyr Pro Leu Ala Pro Gly Ser Ala Ala Gln Thr Asn Ser Met
355 360 365

Val Thr Leu Gly Cys Leu Val Lys Gly Tyr Phe Pro Glu Pro Val Thr
370 375 380

Val Thr Trp Asn Ser Gly Ser Leu Ser Ser Gly Val His Thr Phe Pro
385 390 395 400

Ala Val Leu Gln Ser Asp Leu Tyr Thr Leu Ser Ser Ser Val Thr Val
405 410 415

Pro Ser Ser Thr Trp Pro Ser Gln Thr Val Thr Cys Asn Val Ala His
420 425 430

Pro Ala Ser Ser Thr Lys Val Asp Lys Lys Ile Val Pro Arg Asp Cys
435 440 445

Gly Cys Lys Pro Cys Ile Cys Thr Val Pro Glu Val Ser Ser Val Phe
450 455 460

Ile Phe Pro Pro Lys Pro Lys Asp Val Leu Thr Ile Thr Leu Thr Pro
465 470 475 480

Lys Val Thr Cys Val Val Val Ala Ile Ser Lys Asp Asp Pro Glu Val
485 490 495

Gln Phe Ser Trp Phe Val Asp Asp Val Glu Val His Thr Ala Gln Thr
500 505 510

Lys Pro Arg Glu Glu Gln Ile Asn Ser Thr Phe Arg Ser Val Ser Glu
515 520 525

Leu Pro Ile Met His Gln Asp Trp Leu Asn Gly Lys Glu Phe Lys Cys
530 535 540

Arg Val Asn Ser Ala Ala Phe Gly Ala Pro Ile Glu Lys Thr Ile Ser
545 550 555 560

Lys Thr Lys Gly Arg Pro Lys Ala Pro Gln Val Tyr Thr Ile Pro Pro
565 570 575

Pro Lys Glu Gln Met Ala Lys Asp Lys Val Ser Leu Thr Cys Met Ile
580 585 590

Thr Asn Phe Phe Pro Glu Asp Ile Thr Val Glu Trp Gln Trp Asn Gly
595 600 605

Gln Pro Ala Glu Asn Tyr Asp Asn Thr Gln Pro Ile Met Asp Thr Asp
610 615 620

Gly Ser Tyr Phe Val Tyr Ser Asp Leu Asn Val Gln Lys Ser Asn Trp
625 630 635 640

Glu Ala Gly Asn Thr Phe Thr Cys Ser Val Leu His Glu Gly Leu His
645 650 655

Asn His His Thr Glu Lys Ser Leu Ser His Ser Pro Gly Gly Gly Gly
660 665 670

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
675 680 685

Ser Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro
690 695 700

Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Arg
705 710 715 720

Ser Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu
725 730 735

Leu Ile Ile Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Asp Arg Phe
740 745 750

Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu
755 760 765

Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Gly Gln Val Ile
770 775 780

Pro Pro Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
785 790 795

<210> 6

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

<220>
<223> Synthetic construct

<400> 6

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

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

Asp Gly Gln Thr Tyr Leu Asn Trp Phe Leu Gln Arg Pro Gly Gln Ser
35 40 45

Pro Gln Leu Leu Thr Tyr Trp Met Ser Thr Arg Ala Ser Gly Val Ser
50 55 60

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

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

Arg Glu Tyr Pro Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
100 105 110

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

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

Tyr Pro Lys Asp Ile Asn Val Lys Trp Lys Ile Asp Gly Ser Glu Arg
145 150 155 160

Gln Asn Gly Val Leu Asn Ser Trp Thr Asp Gln Asp Ser Lys Asp Ser
165 170 175

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

Arg His Asn Ser Tyr Thr Cys Glu Ala Thr His Lys Thr Ser Thr Ser
195 200 205

Pro Ile Val Lys Ser Phe Asn Arg Asn Glu Cys
210 215