

sequence listing
SEQUENCE LISTING

<110> Erber Aktiengesellschaft

<120> FUSARIUM TOXIN-CLEAVING POLYPEPTIDE VARIANTS, ADDITIVES CONTAINING SAME, USE OF SAME, AND METHOD FOR SPLITTING FUSARIUM TOXINS

<130> P05368PCT

<160> 46

<170> PatentIn version 3.5

<210> 1

<211> 493

<212> PRT

<213> Artificial sequence

<220>

<223> Modified from SEQ ID-Nr. 46

<400> 1

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

sequence listing

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

Ser Ala Gly Ala Ser Ala Leu Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Leu Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
355 360 365

Ile Glu Leu Leu Ser Ala Ala Phe Ala Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Thr Gly Ile Pro Gly Ala Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ser Met Phe Gly Ser Leu Glu Gly Gly Ala Gly Ala Ser Asp Ile
420 425 430

Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Val His
435 440 445

sequence listing

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Glu Arg
450 455 460

Arg Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
485 490

<210> 2
<211> 493
<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 2

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

sequence listing

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
 195 200 205
 Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
 210 215 220
 Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
 225 230 235 240
 Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
 245 250 255
 Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
 260 265 270
 Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
 275 280 285
 Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
 290 295 300
 Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
 305 310 315 320
 Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
 325 330 335
 Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
 340 345 350
 Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
 355 360 365
 Ile Glu Leu Leu Ser Ala Ala Phe Ala Lys Trp Arg Thr Pro Leu Trp
 370 375 380
 Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
 385 390 395 400
 His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
 405 410 415
 Val Ser Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
 420 425 430
 Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Val His
 435 440 445
 Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Glu Arg
 450 455 460

sequence listing

Arg Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
485 490

<210> 3
<211> 493
<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1
<400> 3

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

sequence listing

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
355 360 365

Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ser Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Val His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Glu Arg
450 455 460

sequence listing

Arg Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
485 490

<210> 4
<211> 493
<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 4

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

sequence listing

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
 210 215 220
 Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
 225 230 235 240
 Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
 245 250 255
 Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
 260 265 270
 Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
 275 280 285
 Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
 290 295 300
 Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
 305 310 315 320
 Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
 325 330 335
 Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
 340 345 350
 Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
 355 360 365
 Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
 370 375 380
 Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
 385 390 395 400
 His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
 405 410 415
 Val Ser Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
 420 425 430
 Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Val His
 435 440 445
 Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
 450 455 460
 Arg Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
 465 470 475 480

sequence listing

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
485 490

<210> 5
<211> 493
<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 5

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Met
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

sequence listing

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Val Gly Asp Ser Gln Phe Asn Asn Gly
355 360 365

Ile Glu Leu Phe Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ser Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Thr Ser Phe Ala Val His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
450 455 460

Arg Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

sequence listing

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
485 490

<210> 6
<211> 493
<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 6

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

sequence listing

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
 225 230 235 240
 Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
 245 250 255
 Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
 260 265 270
 Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
 275 280 285
 Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
 290 295 300
 Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
 305 310 315 320
 Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
 325 330 335
 Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
 340 345 350
 Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
 355 360 365
 Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
 370 375 380
 Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
 385 390 395 400
 His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
 405 410 415
 Val Ser Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
 420 425 430
 Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Val His
 435 440 445
 Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
 450 455 460
 Arg Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
 465 470 475 480
 Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
 485 490

sequence listing

<210> 7
 <211> 493
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Polypeptidvariante der SEQ ID-Nr. 1
 <400> 7

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
 1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
 35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
 50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
 85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
 100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
 130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
 145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
 165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
 180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
 195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
 210 215 220

sequence listing

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
355 360 365

Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ser Met Phe Gly Ser Leu Glu Gly Gly Ala Gly Ala Ser Asp Ile
420 425 430

Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Val His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Glu Arg
450 455 460

Arg Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
485 490

sequence listing

<210> 8
 <211> 493
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 8

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
 1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
 35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
 50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
 85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
 100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
 130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
 145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
 165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
 180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
 195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
 210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
 225 230 235 240

sequence listing

Ala Asp Ile Ser Ala₂₄₅ Leu Arg Arg Ala₂₅₀ Asp Ala Gly Glu Leu Thr₂₅₅ Lys

Ile Ala Gln Ser₂₆₀ Arg Ile Pro Met Ser₂₆₅ Arg Gln Phe Thr Lys₂₇₀ Pro Arg

Pro Met Gly₂₇₅ Pro Ile Leu Asp Gly₂₈₀ Tyr Val Leu Arg Thr₂₈₅ Leu Asp Val

Asp Ala₂₉₀ Phe Ala Lys Gly Ala₂₉₅ Phe Arg Lys Ile Pro Val Ile Val Gly

Gly₃₀₅ Asn Ala Asp Glu Gly₃₁₀ Arg Ala Phe Thr Asp₃₁₅ Arg Leu Pro Val Lys₃₂₀

Thr Val Leu Glu Tyr₃₂₅ Arg Ala Tyr Leu Thr₃₃₀ Glu Gln Phe Gly Asp₃₃₅ Glu

Ala Asp Ala Trp₃₄₀ Glu Arg Cys Tyr Pro₃₄₅ Ala Asn Ser Asp Ala₃₅₀ Asp Val

Pro Ala Ala₃₅₅ Val Ala Arg Leu Phe₃₆₀ Gly Asp Ser His Phe₃₆₅ Asn Asn Gly

Ile Glu₃₇₀ Leu Leu Ser Ala Ala₃₇₅ Phe Val Lys Trp Arg₃₈₀ Thr Pro Leu Trp

Arg₃₈₅ Tyr Arg Phe Thr Gly₃₉₀ Ile Pro Gly Pro Gly₃₉₅ Arg Arg Pro Ala Thr₄₀₀

His Gly Asp Glu Ile₄₀₅ Pro Tyr Val Phe Ala₄₁₀ Asn Leu Gly Pro Ser₄₁₅ Ser

Val Ser Met Phe₄₂₀ Gly Ser Leu Ala Gly₄₂₅ Gly Ala Gly Ala Ala₄₃₀ Asp Ile

Lys Leu Ala₄₃₅ Thr Glu Met Ser Ala₄₄₀ Ala Trp Val Ser Phe₄₄₅ Ala Val His

Gly Val₄₅₀ Pro Asp Gln Gly Thr₄₅₅ Lys Ser His Trp Pro Arg Phe Asp Arg

Arg₄₆₅ Gly Glu Ile Met Thr₄₇₀ Phe Gly Ser Gln Val₄₇₅ Gly Ser Gly Glu Gly₄₈₀

Leu Gly Val Ser Pro₄₈₅ Ser Lys Ala Cys Gln₄₉₀ Pro Ser Lys

<210> 9
<211> 493

sequence listing

<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 9

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

sequence listing

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
355 360 365

Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ser Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Val His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
450 455 460

His Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
485 490

<210> 10
<211> 493
<212> PRT
<213> Artificial sequence

sequence listing

<220>

<223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 10

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

sequence listing

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
355 360 365

Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ser Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Thr Glu Met Ser Gly Ala Trp Val Ser Phe Ala Val His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
450 455 460

Arg Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
485 490

<210> 11
<211> 493
<212> PRT
<213> Artificial sequence

<220>

sequence listing

<223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 11

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

sequence listing

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
355 360 365

Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ser Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Ala His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
450 455 460

Arg Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
485 490

<210> 12
<211> 493
<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1

sequence listing

<400> 12

```

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1      5      10      15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35      40      45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50      55      60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85      90      95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100     105     110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130     135     140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145     150     155     160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165     170     175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180     185     190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195     200     205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210     215     220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225     230     235     240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245     250     255

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260     265     270

```

sequence listing

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
355 360 365

Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ala Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Val His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
450 455 460

Arg Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
485 490

<210> 13
<211> 493
<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 13

sequence listing

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

sequence listing

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
355 360 365

Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ser Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Ala Glu Met Ser Ala Ala Trp Val Ser Phe Ala Val His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
450 455 460

Arg Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
485 490

<210> 14
<211> 493
<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 14

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

sequence listing

Glu Gly Val Glu Gly Asp Val Glu Thr Phe Leu Gly Ile Pro Phe Ala
 20 25 30
 Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
 35 40 45
 Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
 50 55 60
 Gly Asp Glu Arg Leu Arg Glu Gly Ser Arg Ala Ala Gly Thr Ser Glu
 65 70 75 80
 Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
 85 90 95
 Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
 100 105 110
 Ser Gly Ala Val Pro Tyr Tyr Asp Gly Ser Ala Leu Ala Gln Lys Gly
 115 120 125
 Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
 130 135 140
 Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
 145 150 155 160
 Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
 165 170 175
 Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
 180 185 190
 Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
 195 200 205
 Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
 210 215 220
 Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
 225 230 235 240
 Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
 245 250 255
 Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
 260 265 270
 Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
 275 280 285

sequence listing

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
 290 295 300
 Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
 305 310 315 320
 Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
 325 330 335
 Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
 340 345 350
 Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Leu Phe Asn Asn Gly
 355 360 365
 Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
 370 375 380
 Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
 385 390 395 400
 His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
 405 410 415
 Val Ser Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
 420 425 430
 Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Val His
 435 440 445
 Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
 450 455 460
 Arg Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
 465 470 475 480
 Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
 485 490

<210> 15
 <211> 493
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 15

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
 1 5 10 15

sequence listing

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

sequence listing

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
355 360 365

Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ser Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Val His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
450 455 460

Arg Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Pro Pro Ser Lys
485 490

<210> 16
<211> 493
<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 16

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

sequence listing

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

sequence listing

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
355 360 365

Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ser Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Val His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
450 455 460

Arg Gly Glu Ile Lys Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
485 490

<210> 17
<211> 493
<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1
<400> 17

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

sequence listing

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

sequence listing

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
 305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
 325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
 340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
 355 360 365

Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
 370 375 380

Arg Tyr Arg Phe Leu Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
 385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
 405 410 415

Val Ser Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
 420 425 430

Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Val His
 435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
 450 455 460

Arg Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
 465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
 485 490

<210> 18
 <211> 493
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 18

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
 1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
 35 40 45

sequence listing

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

sequence listing

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
355 360 365

Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ser Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Val His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
450 455 460

Ser Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
485 490

<210> 19
<211> 493
<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 19

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

sequence listing

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

sequence listing

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
 325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
 340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
 355 360 365

Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
 370 375 380

Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
 385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
 405 410 415

Val Ser Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
 420 425 430

Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Val His
 435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Ile
 450 455 460

Arg Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
 465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
 485 490

<210> 20

<211> 493

<212> PRT

<213> Artificial sequence

<220>

<223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 20

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
 1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
 35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
 50 55 60

sequence listing

Gly Asp Glu Arg Leu Arg Glu Gly Ser Arg Ala Ala Gly Thr Ser Glu
 65 70 75 80
 Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
 85 90 95
 Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
 100 105 110
 Ser Gly Ala Val Pro Tyr Tyr Asp Gly Ser Ala Leu Ala Gln Lys Gly
 115 120 125
 Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
 130 135 140
 Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
 145 150 155 160
 Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
 165 170 175
 Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
 180 185 190
 Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
 195 200 205
 Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
 210 215 220
 Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
 225 230 235 240
 Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
 245 250 255
 Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
 260 265 270
 Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
 275 280 285
 Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
 290 295 300
 Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
 305 310 315 320
 Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
 325 330 335

sequence listing

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
355 360 365

Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ser Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Val His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
450 455 460

Gly Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
485 490

<210> 21
<211> 493
<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 21

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

sequence listing

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

sequence listing

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
355 360 365

Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ser Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Thr Glu Met Ser Ser Ala Trp Val Ser Phe Ala Val His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
450 455 460

Arg Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
485 490

<210> 22
<211> 493
<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1
<400> 22

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

sequence listing

Asp Cys Leu Tyr Leu₈₅ Asn Ile Trp Ser Pro₉₀ Lys Gln Val Gly Lys₉₅ Gly
 Gly Leu Pro Val₁₀₀ Met Ile Trp Val Tyr₁₀₅ Gly Gly Gly Phe Ser₁₁₀ Gly Gly
 Ser Gly Ala Val₁₁₅ Pro Tyr Tyr Asp₁₂₀ Gly Ser Ala Leu Ala₁₂₅ Gln Lys Gly
 Val Val₁₃₀ Val Val Thr Phe Asn₁₃₅ Tyr Arg Ala Gly Ile₁₄₀ Leu Gly Phe Leu
 Ala His Pro Ala Leu Ser₁₅₀ Lys Glu Ser Pro Asn₁₅₅ Gly Val Ser Gly Asn₁₆₀
 Tyr Gly Leu Leu Asp₁₆₅ Met Leu Ala Ala Phe₁₇₀ Lys Trp Val Gln Asn₁₇₅ Asn
 Ile Arg Glu Phe₁₈₀ Gly Gly Asp Pro Asn₁₈₅ Arg Val Thr Val Phe₁₉₀ Gly Glu
 Ser Ala Gly₁₉₅ Ala Ser Ala Ile Gly₂₀₀ Leu Leu Leu Thr Ser₂₀₅ Pro Leu Ser
 Glu Ser₂₁₀ Ala Phe Asn Gln Ala₂₁₅ Ile Leu Gln Ser Pro₂₂₀ Gly Leu Ala Arg
 Pro Leu Ala Thr Leu Ser₂₃₀ Glu Ser Glu Ala Asn₂₃₅ Gly Leu Glu Leu Gly₂₄₀
 Ala Asp Ile Ser Ala₂₄₅ Leu Arg Arg Ala Asp₂₅₀ Ala Gly Glu Leu Thr Lys₂₅₅
 Ile Ala Gln Ser₂₆₀ Arg Ile Pro Met Ser₂₆₅ Arg Gln Phe Thr Lys₂₇₀ Pro Arg
 Pro Met Gly₂₇₅ Pro Ile Leu Asp Gly₂₈₀ Tyr Val Leu Arg Thr₂₈₅ Leu Asp Val
 Asp Ala Phe Ala Lys Gly Ala₂₉₅ Phe Arg Lys Ile Pro₃₀₀ Val Ile Val Gly
 Gly Asn Ala Asp Glu Gly₃₁₀ Arg Ala Phe Thr Asp₃₁₅ Arg Leu Pro Val Lys₃₂₀
 Thr Val Leu Glu Tyr₃₂₅ Arg Ala Tyr Leu Thr₃₃₀ Glu Gln Phe Gly Asp₃₃₅ Glu
 Ala Asp Ala Trp₃₄₀ Glu Arg Cys Tyr Pro₃₄₅ Ala Asn Ser Asp Ala₃₅₀ Asp Val

sequence listing

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
355 360 365

Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ser Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Val His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Thr His Trp Pro Arg Phe Asp Arg
450 455 460

Arg Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
485 490

<210> 23
<211> 493
<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 23

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

sequence listing

Asp Cys Leu Tyr Leu₈₅ Asn Ile Trp Ser₉₀ Pro Lys Gln Val Gly Lys₉₅ Gly

Gly Leu Pro Val₁₀₀ Met Ile Trp Val Tyr₁₀₅ Gly Gly Gly Phe Ser₁₁₀ Gly Gly

Ser Gly Ala₁₁₅ Val Pro Tyr Tyr Asp₁₂₀ Gly Ser Ala Leu Ala₁₂₅ Gln Lys Gly

Val Val₁₃₀ Val Val Thr Phe Asn₁₃₅ Tyr Arg Ala Gly Ile₁₄₀ Leu Gly Phe Leu

Ala His Pro Ala Leu Ser₁₅₀ Lys Glu Ser Pro Asn₁₅₅ Gly Val Ser Gly Asn₁₆₀

Tyr Gly Leu Leu Asp₁₆₅ Met Leu Ala Ala Phe₁₇₀ Lys Trp Val Gln Asn₁₇₅ Asn

Ile Arg Glu Phe₁₈₀ Gly Gly Asp Pro Asn₁₈₅ Arg Val Thr Val Phe₁₉₀ Gly Glu

Ser Ala Gly₁₉₅ Ala Ser Ala Ile Gly₂₀₀ Leu Leu Leu Thr Ser₂₀₅ Pro Leu Ser

Glu Ser₂₁₀ Ala Phe Asn Gln Ala₂₁₅ Ile Leu Gln Ser Pro₂₂₀ Gly Leu Ala Arg

Pro₂₂₅ Leu Ala Thr Leu Ser₂₃₀ Glu Ser Glu Ala Asn₂₃₅ Gly Leu Glu Leu Gly₂₄₀

Ala Asp Ile Ser Ala₂₄₅ Leu Arg Arg Ala Asp₂₅₀ Ala Gly Glu Leu Thr₂₅₅ Lys

Ile Ala Gln Ser₂₆₀ Arg Ile Pro Met Ser₂₆₅ Arg Gln Phe Thr Lys₂₇₀ Pro Arg

Pro Met Gly₂₇₅ Pro Ile Leu Asp Gly₂₈₀ Tyr Val Leu Arg Thr₂₈₅ Leu Asp Val

Asp Ala₂₉₀ Phe Ala Lys Gly Ala₂₉₅ Phe Arg Lys Ile Pro₃₀₀ Val Ile Val Gly

Gly₃₀₅ Asn Ala Asp Glu Gly₃₁₀ Arg Ala Phe Thr Asp₃₁₅ Arg Leu Pro Val Lys₃₂₀

Thr Val Leu Glu Tyr₃₂₅ Arg Ala Tyr Leu Thr₃₃₀ Glu Gln Phe Gly Asp₃₃₅ Glu

Ala Asp Ala Trp₃₄₀ Glu Arg Cys Tyr Pro₃₄₅ Ala Asn Ser Asp Ala₃₅₀ Asp Val

sequence listing

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
355 360 365

Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ser Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Ser Glu Met Ser Ala Ala Trp Val Ser Phe Ala Val His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
450 455 460

Arg Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
485 490

<210> 24
<211> 493
<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 24

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

sequence listing

Gly Leu Pro Val₁₀₀ Met Ile Trp Val₁₀₅ Tyr Gly Gly Gly Phe Ser Gly Gly
 Ser Gly Ala₁₁₅ Val Pro Tyr Tyr Asp₁₂₀ Gly Ser Ala Leu Ala₁₂₅ Gln Lys Gly
 Val₁₃₀ Val Val Val Thr Phe Asn₁₃₅ Tyr Arg Ala Gly Ile₁₄₀ Leu Gly Phe Leu
 Ala₁₄₅ His Pro Ala Leu Ser₁₅₀ Lys Glu Ser Pro Asn₁₅₅ Gly Val Ser Gly Asn₁₆₀
 Tyr Gly Leu Leu Asp₁₆₅ Met Leu Ala Ala Phe₁₇₀ Lys Trp Val Gln Asn₁₇₅ Asn
 Ile Arg Glu Phe₁₈₀ Gly Gly Asp Pro Asn₁₈₅ Arg Val Thr Val Phe₁₉₀ Gly Glu
 Ser Ala Gly₁₉₅ Ala Ser Ala Ile Gly₂₀₀ Leu Leu Leu Thr Ser₂₀₅ Pro Leu Ser
 Glu Ser₂₁₀ Ala Phe Asn Gln Ala₂₁₅ Ile Leu Gln Ser Pro₂₂₀ Gly Leu Ala Arg
 Pro₂₂₅ Leu Ala Thr Leu Ser₂₃₀ Glu Ser Glu Ala Asn₂₃₅ Gly Leu Glu Leu Gly₂₄₀
 Ala Asp Ile Ser Ala₂₄₅ Leu Arg Arg Ala Asp₂₅₀ Ala Gly Glu Leu Thr₂₅₅ Lys
 Ile Ala Gln Ser₂₆₀ Arg Ile Pro Met Ser₂₆₅ Arg Gln Phe Thr Lys₂₇₀ Pro Arg
 Pro Met Gly₂₇₅ Pro Ile Leu Asp Gly₂₈₀ Tyr Val Leu Arg Thr₂₈₅ Leu Asp Val
 Asp Ala₂₉₀ Phe Ala Lys Gly Ala₂₉₅ Phe Arg Lys Ile Pro Val Ile Val Gly
 Gly₃₀₅ Asn Ala Asp Glu Gly₃₁₀ Arg Ala Phe Thr Asp₃₁₅ Arg Leu Pro Val Lys₃₂₀
 Thr Val Leu Glu Tyr₃₂₅ Arg Ala Tyr Leu Thr₃₃₀ Glu Gln Phe Gly Asp₃₃₅ Glu
 Ala Asp Ala Trp₃₄₀ Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
 Pro Ala Ala₃₅₅ Val Ala Arg Leu Phe₃₆₀ Gly Asp Thr Gln Phe₃₆₅ Asn Asn Gly

sequence listing

Ile Glu Val Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ser Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Val His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
450 455 460

Arg Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
485 490

<210> 25
<211> 493
<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 25

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

sequence listing

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
355 360 365

sequence listing

Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ser Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Ala His
435 440 445

Gly Val Pro Asp Arg Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
450 455 460

Arg Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
485 490

<210> 26

<211> 493

<212> PRT

<213> Artificial sequence

<220>

<223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 26

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

sequence listing

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
355 360 365

Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

sequence listing

Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ser Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Val His
435 440 445

Gly Val Pro Asp Gln Gly Thr Gln Ser His Trp Pro Arg Tyr Asp Arg
450 455 460

Arg Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
485 490

<210> 27
<211> 493
<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1
<400> 27

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

sequence listing

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
355 360 365

Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

sequence listing

Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ser Val Phe Gly Ser Leu Ala Gly Gly Val Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Val His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
450 455 460

Arg Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
485 490

<210> 28
<211> 493
<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 28

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

sequence listing

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
 130 135 140
 Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
 145 150 155 160
 Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
 165 170 175
 Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
 180 185 190
 Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
 195 200 205
 Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
 210 215 220
 Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
 225 230 235 240
 Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
 245 250 255
 Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
 260 265 270
 Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
 275 280 285
 Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
 290 295 300
 Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
 305 310 315 320
 Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
 325 330 335
 Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
 340 345 350
 Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Ile Asn Asn Gly
 355 360 365
 Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
 370 375 380
 Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
 385 390 395 400

sequence listing

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ser Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Val His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
450 455 460

Arg Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Asn Ala Cys Gln Pro Ser Lys
485 490

<210> 29
<211> 493
<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1
<400> 29

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

sequence listing

Val	Val	Val	Val	Thr	Phe	Asn	Tyr	Arg	Ala	Gly	Ile	Leu	Gly	Phe	Leu
	130					135					140				
Ala	His	Pro	Ala	Leu	Ser	Lys	Glu	Ser	Pro	Asn	Gly	Val	Ser	Gly	Asn
145					150					155					160
Tyr	Gly	Leu	Leu	Asp	Met	Leu	Ala	Ala	Phe	Lys	Trp	Val	Gln	Asn	Asn
				165					170					175	
Ile	Arg	Glu	Phe	Gly	Gly	Asp	Pro	Asn	Arg	Val	Thr	Val	Phe	Gly	Glu
			180					185					190		
Ser	Ala	Gly	Ala	Ser	Ala	Ile	Gly	Leu	Leu	Leu	Thr	Ser	Pro	Leu	Ser
		195					200					205			
Glu	Ser	Ala	Phe	Asn	Gln	Ala	Ile	Leu	Gln	Ser	Pro	Gly	Leu	Ala	Arg
	210					215					220				
Pro	Leu	Ala	Thr	Leu	Ser	Glu	Ser	Glu	Ala	Asn	Gly	Leu	Glu	Leu	Gly
225					230					235					240
Ala	Asp	Ile	Ser	Ala	Leu	Arg	Arg	Ala	Asp	Ala	Gly	Glu	Leu	Thr	Lys
				245					250					255	
Ile	Ala	Gln	Ser	Arg	Ile	Pro	Met	Ser	Arg	Gln	Phe	Thr	Lys	Pro	Arg
			260					265					270		
Pro	Met	Gly	Pro	Ile	Leu	Asp	Gly	Tyr	Val	Leu	Arg	Thr	Leu	Asp	Val
		275					280					285			
Asp	Ala	Phe	Ala	Lys	Gly	Ala	Phe	Arg	Lys	Ile	Pro	Val	Ile	Val	Gly
	290					295					300				
Gly	Asn	Ala	Asp	Glu	Gly	Arg	Ala	Phe	Thr	Asp	Arg	Leu	Pro	Val	Lys
305					310					315					320
Thr	Val	Leu	Glu	Tyr	Arg	Ala	Tyr	Leu	Thr	Glu	Gln	Phe	Gly	Asp	Glu
				325					330					335	
Ala	Asp	Ala	Trp	Glu	Arg	Cys	Tyr	Pro	Ala	Asn	Ser	Asp	Ala	Asp	Val
			340					345					350		
Pro	Ala	Ala	Val	Ala	Arg	Leu	Phe	Gly	Asp	Ser	Gln	Phe	Asn	Asn	Gly
		355					360					365			
Ile	Glu	Met	Leu	Ser	Ala	Ala	Phe	Val	Lys	Trp	Arg	Thr	Pro	Leu	Trp
	370					375					380				
Arg	Tyr	Arg	Phe	Thr	Gly	Ile	Pro	Gly	Pro	Gly	Arg	Arg	Pro	Ala	Thr
385					390					395					400

sequence listing

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ser Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Val His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
450 455 460

Arg Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Asn Ala Cys Gln Pro Ser Lys
485 490

<210> 30
<211> 493
<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 30

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

sequence listing

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Leu Phe Asn Asn Gly
355 360 365

Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Leu Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

sequence listing

Val Ser Val Phe Gly Ser Leu Ala Gly Gly Val Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Ala His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
450 455 460

Ser Gly Glu Ile Lys Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
485 490

<210> 31
<211> 493
<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1
<400> 31

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

sequence listing

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
355 360 365

Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Leu Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

sequence listing

Val Ser Val Phe Gly Ser Leu Ala Gly Gly Val Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Ala His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
450 455 460

Ser Gly Glu Ile Lys Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
485 490

<210> 32

<211> 493

<212> PRT

<213> Artificial sequence

<220>

<223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 32

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

sequence listing

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
 165 170 175
 Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
 180 185 190
 Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
 195 200 205
 Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
 210 215 220
 Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
 225 230 235 240
 Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
 245 250 255
 Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
 260 265 270
 Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
 275 280 285
 Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
 290 295 300
 Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
 305 310 315 320
 Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
 325 330 335
 Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
 340 345 350
 Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Thr Leu Phe Asn Asn Gly
 355 360 365
 Ile Glu Val Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
 370 375 380
 Arg Tyr Arg Phe Leu Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
 385 390 395 400
 His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
 405 410 415
 Val Ser Val Phe Gly Ser Leu Ala Gly Gly Val Gly Ala Ala Asp Ile
 420 425 430

sequence listing

Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Ala His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Ile
450 455 460

Ser Gly Glu Ile Lys Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
485 490

<210> 33
<211> 493
<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1
<400> 33

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

sequence listing

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
 165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
 180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
 195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
 210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
 225 230 235 240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
 245 250 255

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
 260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
 275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
 290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
 305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
 325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
 340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Thr Gln Phe Asn Asn Gly
 355 360 365

Ile Glu Val Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
 370 375 380

Arg Tyr Arg Phe Leu Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
 385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
 405 410 415

Val Ser Val Phe Gly Ser Leu Ala Gly Gly Val Gly Ala Ala Asp Ile
 420 425 430

sequence listing

Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Ala His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Ile
450 455 460

Ser Gly Glu Ile Lys Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
485 490

<210> 34

<211> 493

<212> PRT

<213> Artificial sequence

<220>

<223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 34

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

sequence listing

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Leu Phe Asn His Gly
355 360 365

Ile Glu Val Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Leu Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ala Val Phe Gly Ser Leu Ala Gly Gly Val Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Ala Glu Met Ser Ser Ala Trp Val Ser Phe Ala Ala His
435 440 445

sequence listing

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Ile
450 455 460

Ser Gly Glu Ile Lys Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Pro Pro Ser Lys
485 490

<210> 35
<211> 493
<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1
<400> 35

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

sequence listing

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn His Gly
355 360 365

Ile Glu Val Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Leu Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ala Val Phe Gly Ser Leu Ala Gly Gly Val Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Ala Glu Met Ser Ser Ala Trp Val Ser Phe Ala Ala His
435 440 445

sequence listing

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Ile
450 455 460

Ser Gly Glu Ile Lys Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Pro Pro Ser Lys
485 490

<210> 36
<211> 493
<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 36

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

sequence listing

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Thr Gln Phe Asn His Gly
355 360 365

Ile Glu Val Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ser Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Val His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
450 455 460

sequence listing

Arg Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Pro Pro Ser Lys
485 490

<210> 37
<211> 493
<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1
<400> 37

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

sequence listing

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
355 360 365

Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ala Val Phe Gly Ser Leu Ala Gly Gly Val Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Ala Glu Met Ser Ser Ala Trp Val Ser Phe Ala Ala His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
450 455 460

sequence listing

Arg Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
 465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
 485 490

<210> 38
 <211> 493
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 38

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
 1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
 35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
 50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
 85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
 100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
 130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
 145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
 165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
 180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
 195 200 205

sequence listing

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
 210 215 220
 Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
 225 230 235 240
 Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
 245 250 255
 Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
 260 265 270
 Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
 275 280 285
 Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
 290 295 300
 Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
 305 310 315 320
 Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
 325 330 335
 Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
 340 345 350
 Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
 355 360 365
 Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
 370 375 380
 Arg Tyr Arg Phe Leu Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
 385 390 395 400
 His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
 405 410 415
 Val Ser Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
 420 425 430
 Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Val His
 435 440 445
 Gly Val Pro Asp Gln Gly Thr Lys Thr His Trp Pro Arg Phe Asp Ile
 450 455 460
 Ser Gly Glu Ile Lys Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
 465 470 475 480

sequence listing

Leu Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys
485 490

<210> 39
<211> 493
<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 39

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

sequence listing

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Thr Gln Phe Asn Asn Gly
355 360 365

Ile Glu Val Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Leu Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ser Val Phe Gly Ser Leu Ala Gly Gly Val Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Thr Glu Met Ser Ser Ala Trp Val Ser Phe Ala Ala His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Thr His Trp Pro Arg Phe Asp Ile
450 455 460

Arg Gly Glu Ile Lys Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

sequence listing

Leu Gly Val Ser Pro Ser Lys Ala Cys Pro Pro Ser Lys
485 490

<210> 40
<211> 493
<212> PRT
<213> Artificial sequence

<220>
<223> Polypeptidvariante der SEQ ID-Nr. 1
<400> 40

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

sequence listing

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
 225 230 235 240
 Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
 245 250 255
 Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
 260 265 270
 Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
 275 280 285
 Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
 290 295 300
 Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
 305 310 315 320
 Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
 325 330 335
 Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
 340 345 350
 Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
 355 360 365
 Ile Glu Leu Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
 370 375 380
 Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
 385 390 395 400
 His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
 405 410 415
 Val Ser Met Phe Gly Ser Leu Ala Gly Gly Ala Gly Ala Ala Asp Ile
 420 425 430
 Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Ala His
 435 440 445
 Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
 450 455 460
 Ser Gly Glu Ile Lys Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
 465 470 475 480
 Leu Gly Val Ser Pro Ser Lys Ala Cys Pro Pro Ser Lys
 485 490

sequence listing

<210> 41
 <211> 493
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 41

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
 1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
 35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
 50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
 85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
 100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
 130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
 145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
 165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
 180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
 195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
 210 215 220

sequence listing

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
355 360 365

Ile Glu Met Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ser Val Phe Gly Ser Leu Ala Gly Gly Val Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Val His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
450 455 460

Ser Gly Glu Ile Lys Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Asn Ala Cys Pro Pro Ser Lys
485 490

sequence listing

<210> 42
 <211> 493
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 42

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
 1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
 35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
 50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
 85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
 100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
 130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
 145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
 165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
 180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
 195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
 210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
 225 230 235 240

sequence listing

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
355 360 365

Ile Glu Met Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Thr Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ser Val Phe Gly Ser Leu Ala Gly Gly Val Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Ala His
435 440 445

Gly Val Pro Asp Arg Gly Thr Lys Ser His Trp Pro Arg Phe Asp Arg
450 455 460

Ser Gly Glu Ile Lys Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Asn Ala Cys Pro Pro Ser Lys
485 490

<210> 43
<211> 493

sequence listing

<212> PRT

<213> Artificial sequence

<220>

<223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 43

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

sequence listing

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn His Gly
355 360 365

Ile Glu Val Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Leu Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ala Val Phe Gly Ser Leu Ala Gly Gly Val Gly Pro Ala Asp Ile
420 425 430

Lys Leu Ala Ala Glu Met Ser Ser Ala Trp Val Ser Phe Ala Ala His
435 440 445

Gly Val Pro Asp Gln Gly Thr Lys Thr His Trp Pro Arg Phe Asp Ile
450 455 460

Ser Gly Glu Ile Lys Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Lys Ala Cys Pro Pro Ser Lys
485 490

<210> 44
<211> 493
<212> PRT
<213> Artificial sequence

sequence listing

<220>

<223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 44

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

sequence listing

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly
355 360 365

Ile Glu Met Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Leu Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ser Val Phe Gly Ser Leu Ala Gly Gly Val Gly Ala Ala Asp Ile
420 425 430

Lys Leu Ala Ala Glu Met Ser Ala Ala Trp Val Ser Phe Ala Ala His
435 440 445

Gly Val Pro Asp Arg Gly Thr Gln Ser His Trp Pro Arg Tyr Asp Arg
450 455 460

Ser Gly Glu Ile Lys Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Asn Ala Cys Pro Pro Ser Lys
485 490

<210> 45
<211> 493
<212> PRT
<213> Artificial sequence

<220>

sequence listing

<223> Polypeptidvariante der SEQ ID-Nr. 1

<400> 45

Gln Thr Asp Asp Pro Lys Leu Val Arg His Thr Gln Ser Gly Ala Val
1 5 10 15

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

Ala Pro Pro Val Gly Asp Leu Arg Trp Arg Pro Pro Ala Pro Pro Arg
35 40 45

Ala Trp Ala Gly Thr Arg Asp Gly Arg Arg Phe Ala Pro Asp Cys Ile
50 55 60

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

Asp Cys Leu Tyr Leu Asn Ile Trp Ser Pro Lys Gln Val Gly Lys Gly
85 90 95

Gly Leu Pro Val Met Ile Trp Val Tyr Gly Gly Gly Phe Ser Gly Gly
100 105 110

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

Val Val Val Val Thr Phe Asn Tyr Arg Ala Gly Ile Leu Gly Phe Leu
130 135 140

Ala His Pro Ala Leu Ser Lys Glu Ser Pro Asn Gly Val Ser Gly Asn
145 150 155 160

Tyr Gly Leu Leu Asp Met Leu Ala Ala Phe Lys Trp Val Gln Asn Asn
165 170 175

Ile Arg Glu Phe Gly Gly Asp Pro Asn Arg Val Thr Val Phe Gly Glu
180 185 190

Ser Ala Gly Ala Ser Ala Ile Gly Leu Leu Leu Thr Ser Pro Leu Ser
195 200 205

Glu Ser Ala Phe Asn Gln Ala Ile Leu Gln Ser Pro Gly Leu Ala Arg
210 215 220

Pro Leu Ala Thr Leu Ser Glu Ser Glu Ala Asn Gly Leu Glu Leu Gly
225 230 235 240

Ala Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys
245 250 255

sequence listing

Ile Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg
260 265 270

Pro Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val
275 280 285

Asp Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Ile Val Gly
290 295 300

Gly Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys
305 310 315 320

Thr Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu
325 330 335

Ala Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val
340 345 350

Pro Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn His Gly
355 360 365

Ile Glu Val Leu Ser Ala Ala Phe Val Lys Trp Arg Thr Pro Leu Trp
370 375 380

Arg Tyr Arg Phe Leu Gly Ile Pro Gly Pro Gly Arg Arg Pro Ala Thr
385 390 395 400

His Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser
405 410 415

Val Ala Val Phe Gly Ser Leu Ala Gly Gly Val Gly Pro Ala Asp Ile
420 425 430

Lys Leu Ala Ala Glu Met Ser Ser Ala Trp Val Ser Phe Ala Ala His
435 440 445

Gly Val Pro Asp Arg Gly Thr Gln Thr His Trp Pro Arg Tyr Asp Ile
450 455 460

Ser Gly Glu Ile Lys Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly
465 470 475 480

Leu Gly Val Ser Pro Ser Asn Ala Cys Pro Pro Ser Lys
485 490

<210> 46
<211> 540
<212> PRT
<213> Sphingopyxis sp.

<400> 46

Val Lys Glu His Gln Cys Arg Gly Gly Arg Ala Ser Pro Ala Ala Pro
Page 89

sequence listing

1	5	10	15
Ala Thr Trp	Leu Ala Arg Ile Ser	Val Ser Arg Gly Ala	Ser Ala Ile
	20	25	30
Ala Trp Thr	Phe Met Leu Gly	Ala Thr Ala Ile Pro	Val Ala Ala Gln
	35	40	45
Thr Asp Asp	Pro Lys Leu Val	Arg His Thr Gln	Ser Gly Ala Val Glu
	50	55	60
Gly Val Glu	Gly Asp Val Glu Thr Phe	Leu Gly Ile Pro Phe	Ala Ala
65	70	75	80
Pro Pro Val	Gly Asp Leu Arg Trp	Arg Pro Pro Ala	Pro Pro Arg Ala
	85	90	95
Trp Ala Gly	Thr Arg Asp Gly	Arg Phe Ala Pro	Asp Cys Ile Gly
	100	105	110
Asn Glu Arg	Leu Arg Glu Gly	Ser Arg Ala Ala	Gly Thr Ser Glu Asp
	115	120	125
Cys Leu Tyr	Leu Asn Ile Trp	Ser Pro Lys Gln	Val Gly Lys Gly Gly
	130	135	140
Leu Pro Val	Met Ile Trp Val Tyr	Gly Gly Gly Phe	Ser Gly Gly Ser
145	150	155	160
Gly Ala Val	Pro Tyr Tyr Asp	Gly Ser Ala Leu	Ala Gln Lys Gly Val
	165	170	175
Val Val Val	Thr Phe Asn Tyr	Arg Ala Gly Ile	Leu Gly Phe Leu Ala
	180	185	190
His Pro Ala	Leu Ser Lys Glu	Ser Pro Asn Gly	Val Ser Gly Asn Tyr
	195	200	205
Gly Leu Leu	Asp Met Leu Ala	Ala Phe Lys Trp	Val Gln Asn Asn Ile
	210	215	220
Arg Glu Phe	Gly Gly Asp Pro	Asn Arg Val Thr	Val Phe Gly Glu Ser
225	230	235	240
Ala Gly Ala	Ser Ala Leu Gly	Leu Leu Leu Thr	Ser Pro Leu Ser Glu
	245	250	255
Ser Ala Phe	Asn Gln Ala Ile	Leu Gln Ser Pro	Gly Leu Ala Arg Pro
	260	265	270
Leu Ala Thr	Leu Ser Glu Ser	Glu Ala Asn Gly	Leu Glu Leu Gly Ala

sequence listing

275	280	285
Asp Ile Ser Ala Leu Arg Arg Ala Asp Ala Gly Glu Leu Thr Lys Ile		
290	295	300
Ala Gln Ser Arg Ile Pro Met Ser Arg Gln Phe Thr Lys Pro Arg Pro		
305	310	315
Met Gly Pro Ile Leu Asp Gly Tyr Val Leu Arg Thr Leu Asp Val Asp		
325	330	335
Ala Phe Ala Lys Gly Ala Phe Arg Lys Ile Pro Val Leu Val Gly Gly		
340	345	350
Asn Ala Asp Glu Gly Arg Ala Phe Thr Asp Arg Leu Pro Val Lys Thr		
355	360	365
Val Leu Glu Tyr Arg Ala Tyr Leu Thr Glu Gln Phe Gly Asp Glu Ala		
370	375	380
Asp Ala Trp Glu Arg Cys Tyr Pro Ala Asn Ser Asp Ala Asp Val Pro		
385	390	395
Ala Ala Val Ala Arg Leu Phe Gly Asp Ser Gln Phe Asn Asn Gly Ile		
405	410	415
Glu Leu Leu Ser Ala Ala Phe Ala Lys Trp Arg Thr Pro Leu Trp Arg		
420	425	430
Tyr Arg Phe Thr Gly Ile Pro Gly Ala Gly Arg Arg Pro Ala Thr His		
435	440	445
Gly Asp Glu Ile Pro Tyr Val Phe Ala Asn Leu Gly Pro Ser Ser Val		
450	455	460
Ser Met Phe Gly Ser Leu Glu Gly Gly Ala Gly Ala Ser Asp Ile Lys		
465	470	475
Leu Ala Thr Glu Met Ser Ala Ala Trp Val Ser Phe Ala Val His Gly		
485	490	495
Val Pro Asp Gln Gly Thr Lys Ser His Trp Pro Arg Phe Glu Arg Arg		
500	505	510
Gly Glu Ile Met Thr Phe Gly Ser Gln Val Gly Ser Gly Glu Gly Leu		
515	520	525
Gly Val Ser Pro Ser Lys Ala Cys Gln Pro Ser Lys		
530	535	540