

SEQUENCE LISTING

<110> BIOMARIN PHARMACEUTICAL INC.

<120> NOVEL ADENO-ASSOCIATED VIRUS CAPSID PROTEINS

<130> 30610/50821A

<150> US-62/366,838

<151> 2016-07-26

<160> 160

<170> PatentIn version 3.5

<210> 1

<211> 736

<212> PRT

<213> Adeno-Associated Virus

<400> 1

Met	Ser	Phe	Val	Asp	His	Pro	Pro	Asp	Trp	Leu	Glu	Ser	Ile	Gly	Asp
1				5					10					15	

Gly	Phe	Arg	Glu	Phe	Leu	Gly	Leu	Glu	Ala	Gly	Pro	Pro	Lys	Pro	Lys
			20					25					30		

Ala	Asn	Gln	Gln	Lys	Gln	Asp	Asn	Ala	Arg	Gly	Leu	Val	Leu	Pro	Gly
		35					40					45			

Tyr	Lys	Tyr	Leu	Gly	Pro	Gly	Asn	Gly	Leu	Asp	Lys	Gly	Asp	Pro	Val
	50					55					60				

Asn	Phe	Ala	Asp	Glu	Val	Ala	Arg	Glu	His	Asp	Leu	Ser	Tyr	Gln	Lys
65					70					75					80

Gln	Leu	Glu	Ala	Gly	Asp	Asn	Pro	Tyr	Leu	Lys	Tyr	Asn	His	Ala	Asp
				85					90					95	

Ala	Glu	Phe	Gln	Glu	Lys	Leu	Ala	Ser	Asp	Thr	Ser	Phe	Gly	Gly	Asn
			100					105					110		

Leu	Gly	Lys	Ala	Val	Phe	Gln	Ala	Lys	Lys	Arg	Ile	Leu	Glu	Pro	Leu
		115					120					125			

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

Pro Leu Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Val Gly
145 150 155 160

Lys Lys Gly Lys Gln Pro Ala Arg Lys Arg Leu Asn Phe Asp Asp Glu
165 170 175

Pro Gly Ala Gly Asp Gly Pro Pro Pro Glu Gly Pro Ser Ser Gly Ala
180 185 190

Met Ser Thr Glu Thr Glu Met Arg Ala Ala Ala Gly Gly Asn Gly Gly
195 200 205

Asp Ala Gly Gln Gly Ala Glu Gly Val Gly Asn Ala Ser Gly Asp Trp
210 215 220

His Cys Asp Ser Thr Trp Ser Glu Ser His Val Thr Thr Thr Ser Thr
225 230 235 240

Arg Thr Trp Val Leu Pro Thr Tyr Asn Asn His Leu Tyr Leu Arg Leu
245 250 255

Gly Ser Ser Asn Ala Ser Asp Thr Phe Asn Gly Phe Ser Thr Pro Trp
260 265 270

Gly Tyr Phe Asp Phe Asn Arg Phe His Cys His Phe Ser Pro Arg Asp
275 280 285

Trp Gln Arg Leu Ile Asn Asn His Trp Gly Leu Arg Pro Lys Ser Met
290 295 300

Gln Val Arg Ile Phe Asn Ile Gln Val Lys Glu Val Thr Thr Ser Asn
305 310 315 320

Gly Glu Thr Thr Val Ser Asn Asn Leu Thr Ser Thr Val Gln Ile Phe
325 330 335

Ala Asp Ser Thr Tyr Glu Leu Pro Tyr Val Met Asp Ala Gly Gln Glu
340 345 350

Gly Ser Leu Pro Pro Phe Pro Asn Asp Val Phe Met Val Pro Gln Tyr
355 360 365

Gly Tyr Cys Gly Leu Val Thr Gly Gly Ser Ser Gln Asn Gln Thr Asp
370 375 380

Arg Asn Ala Phe Tyr Cys Leu Glu Tyr Phe Pro Ser Gln Met Leu Arg
385 390 395 400

Thr Gly Asn Asn Phe Glu Met Val Tyr Lys Phe Glu Asn Val Pro Phe
405 410 415

His Ser Met Tyr Ala His Ser Gln Ser Leu Asp Arg Leu Met Asn Pro
420 425 430

Leu Leu Asp Gln Tyr Leu Trp Glu Leu Gln Ser Thr Thr Ser Gly Gly
435 440 445

Thr Leu Asn Gln Gly Asn Ser Ala Thr Asn Phe Ala Lys Leu Thr Lys
450 455 460

Thr Asn Phe Ser Gly Tyr Arg Lys Asn Trp Leu Pro Gly Pro Met Met
465 470 475 480

Lys Gln Gln Arg Phe Ser Lys Thr Ala Ser Gln Asn Tyr Lys Ile Pro
485 490 495

Gln Gly Arg Asn Asn Ser Leu Leu His Tyr Glu Thr Arg Thr Thr Leu
500 505 510

Asp Gly Arg Trp Ser Asn Phe Ala Pro Gly Thr Ala Met Ala Thr Ala
515 520 525

Ala Asn Asp Ala Thr Asp Phe Ser Gln Ala Gln Leu Ile Phe Ala Gly
530 535 540

Pro Asn Ile Thr Gly Asn Thr Thr Thr Asp Ala Asn Asn Leu Met Phe
545 550 555 560

Thr Ser Glu Asp Glu Leu Arg Ala Thr Asn Pro Arg Asp Thr Asp Leu
565 570 575

Phe Gly His Leu Ala Thr Asn Gln Gln Asn Ala Thr Thr Val Pro Thr
580 585 590

Val Asp Asp Val Asp Gly Val Gly Val Tyr Pro Gly Met Val Trp Gln
595 600 605

Asp Arg Asp Ile Tyr Tyr Gln Gly Pro Ile Trp Ala Lys Ile Pro His
610 615 620

Thr Asp Gly His Phe His Pro Ser Pro Leu Ile Gly Gly Phe Gly Leu
625 630 635 640

Lys Ser Pro Pro Pro Gln Ile Phe Ile Lys Asn Thr Pro Val Pro Ala
645 650 655

Asn Pro Ala Thr Thr Phe Ser Pro Ala Arg Ile Asn Ser Phe Ile Thr
660 665 670

Gln Tyr Ser Thr Gly Gln Val Ala Val Lys Ile Glu Trp Glu Ile Gln
675 680 685

Lys Glu Arg Ser Lys Arg Trp Asn Pro Glu Val Gln Phe Thr Ser Asn
690 695 700

Tyr Gly Ala Gln Asp Ser Leu Leu Trp Ala Pro Asp Asn Ala Gly Ala
705 710 715 720

Tyr Lys Glu Pro Arg Ala Ile Gly Ser Arg Tyr Leu Thr Asn His Leu
725 730 735

<210> 2
<211> 713
<212> PRT
<213> Adeno-Associated Virus

<400> 2

Met Ser Phe Phe Asp Trp Leu Gly Lys Gln Tyr Ala Gln Gly Ala Ala
1 5 10 15

Glu Phe Trp Asp Leu Lys Ser Gly Pro Pro Ala Pro Lys Lys Ala Arg
20 25 30

Lys Asp Gly Ser Ala Gly Phe Asn Phe Pro Gly His Lys Tyr Leu Gly
35 40 45

Pro Gly Asn Ser Leu Asp Arg Gly Asp Pro Val Asp Ala Asp Asp Ala
50 55 60

Ala Ala Gln Lys His Asp Gln Ser Tyr Gln Glu Gln Leu Glu Ala Gly
65 70 75 80

Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp Arg Glu Phe Gln Glu
85 90 95

Ala Leu Lys Asp Asp Thr Ser Phe Glu Gly Asn Leu Ala Arg Gly Leu
100 105 110

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

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

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

Asp Glu Glu Asp Arg Glu Phe Ala Ala Ala Ala Glu Thr Glu Thr
165 170 175

Gly Ser Ala Pro Pro Thr Gly Asn Leu Gly Pro Gly Thr Met Ala Gly
180 185 190

Gly Gly Ser Ala Pro Ile Asp Asp Gly Ser Tyr Gly Ala Asp Gly Val
195 200 205

Gly Asn Ala Ser Gly Asp Trp His Cys Asp Ser Thr Trp Leu Asp Asn
210 215 220

Cys Val Ile Thr Arg Thr Thr Arg Thr Trp Asn Leu Pro Thr Tyr Asn
225 230 235 240

Asn His Ile Tyr Lys Arg Leu Asn Gly Thr Thr Ser Gly Asp Gln Ser
245 250 255

Tyr Phe Gly Phe Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe
260 265 270

His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn
275 280 285

Trp Gly Leu Arg Pro Lys Ser Leu Arg Phe Lys Ile Phe Asn Ile Gln
290 295 300

Val Lys Glu Val Thr Thr Gln Asp Ser Thr Lys Ile Ile Ser Asn Asn

305		310		315		320
Leu Thr Ser Thr	Val Gln Val Phe Ala Asp Thr Glu Tyr Gln Leu Pro					
	325			330		335
Tyr Val Ile Gly Ser Ala His Glu Gly Cys Leu Pro Pro Phe Pro Ala						
	340			345		350
Asp Val Phe Met Leu Pro Gln Tyr Gly Tyr Cys Thr Arg Gln Asp Gly						
	355			360		365
Asn Ser Asn Asn Pro Thr Pro Arg Ser Ala Phe Tyr Cys Leu Glu Tyr						
	370			375		380
Phe Pro Ser Lys Met Leu Arg Thr Gly Asn Ser Phe Glu Phe Thr Tyr						
385		390		395		400
Asn Phe Glu Lys Val Pro Phe His Ser Met Trp Ala His Asn Gln Ser						
	405			410		415
Leu Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu						
	420			425		430
Asp Val Thr Ser Ser Thr Gly Phe Thr Tyr Gln Lys Gly Val His Thr						
	435			440		445
Asn Leu Pro Glu Gln Glu Arg Asn Trp Leu Pro Gly Pro Gly Ile Arg						
	450			455		460
Asn Gln Ala Trp Phe Asn Ser Ala Thr Gly Asn Asn Pro Leu Thr Gly						
465		470		475		480
Thr Trp Gln Tyr Ser Asn Lys Tyr Val Leu Glu Asn Arg Ala Ser Lys						
	485			490		495
Ile Ala Pro Gly Pro Ala Met Gly Ile Glu Ser Thr Lys Phe Asp Gly						
	500			505		510
Asn Gly Ile Ile Phe Ser Lys Glu Tyr Ile Thr Asn Val Asn Thr Ala						
	515			520		525
Asn Pro Asn Gln Val Asn Ile Thr Arg Glu Thr Glu Ile Asn Ser Thr						
	530			535		540

Asn Pro Leu Ala Gly Gly Ser Leu Gly Ala His Ala Asn Asn Ser Gln
545 550 555 560

Asn Thr Thr Thr Ala Pro Thr Leu Asp His Thr Asn Val Met Gly Val
565 570 575

Phe Pro Gly Ser Val Trp Gln Asp Arg Asp Ile Tyr Leu Gln Gly Gln
580 585 590

Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro Ser Pro
595 600 605

Leu Met Gly Gly Phe Gly Leu Lys Asn Pro Pro Pro Gln Ile Leu Ile
610 615 620

Lys Asn Thr Pro Val Pro Ala Asp Pro Pro Thr Glu Phe Asn Ala Asn
625 630 635 640

Lys Ile Ser Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val Thr Val
645 650 655

Glu Met Glu Trp Glu Leu Gln Lys Glu Thr Ser Lys Arg Trp Asn Pro
660 665 670

Glu Ile Gln Tyr Ser Asp Asp Ser Ser Ser Thr Ser Gly Ser Ile Leu
675 680 685

His Phe Ala Pro Asp Asp Val Gly Asn Tyr Lys Glu Phe Arg Ser Ile
690 695 700

Gly Thr Arg Tyr Leu Thr Arg Pro Leu
705 710

<210> 3
<211> 735
<212> PRT
<213> Adeno-Associated Virus

<400> 3

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
1 5 10 15

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
20 25 30

Lys Pro Ala Glu Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ala Asp Ser Val Pro Asp Pro Gln Pro Leu Gly Gln Pro Pro
180 185 190

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

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
385 390 395 400

Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Thr Phe Glu
405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Arg Gln Ala Ala Thr
580 585 590

Ala Asp Val Asn Thr Gln Gly Val Leu Pro Gly Met Val Trp Gln Asp
595 600 605

Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His Thr
610 615 620

Asp Gly His Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Leu Lys
625 630 635 640

His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala Asn
645 650 655

Pro Ser Thr Thr Phe Ser Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln
660 665 670

Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln Lys
675 680 685

Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr
690 695 700

Asn Lys Ser Val Asn Val Asp Phe Thr Val Asp Thr Asn Gly Val Tyr
705 710 715 720

Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
725 730 735

<210> 4
<211> 734
<212> PRT
<213> Adeno-Associated Virus

<400> 4

Met Thr Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser Glu
1 5 10 15

Gly Val Arg Glu Trp Trp Ala Leu Gln Pro Gly Ala Pro Lys Pro Lys
20 25 30

Ala Asn Gln Gln His Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Lys Tyr Leu Gly Pro Gly Asn Gly Leu Asp Lys Gly Glu Pro Val
50 55 60

Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp Gln
65 70 75 80

Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
85 90 95

Ala Glu Phe Gln Gln Arg Leu Gln Gly Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro Leu
115 120 125

Gly Leu Val Glu Gln Ala Gly Glu Thr Ala Pro Gly Lys Lys Arg Pro
130 135 140

Leu Ile Glu Ser Pro Gln Gln Pro Asp Ser Ser Thr Gly Ile Gly Lys
145 150 155 160

Lys Gly Lys Gln Pro Ala Lys Lys Lys Leu Val Phe Glu Asp Glu Thr
165 170 175

Gly Ala Gly Asp Gly Pro Pro Glu Gly Ser Thr Ser Gly Ala Met Ser
180 185 190

Asp Asp Ser Glu Met Arg Ala Ala Ala Gly Gly Ala Ala Val Glu Gly
195 200 205

Gly Gln Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asp Trp His Cys
210 215 220

Asp Ser Thr Trp Ser Glu Gly His Val Thr Thr Thr Ser Thr Arg Thr
225 230 235 240

Trp Val Leu Pro Thr Tyr Asn Asn His Leu Tyr Lys Arg Leu Gly Glu
245 250 255

Ser Leu Gln Ser Asn Thr Tyr Asn Gly Phe Ser Thr Pro Trp Gly Tyr
260 265 270

Phe Asp Phe Asn Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln
275 280 285

Arg Leu Ile Asn Asn Asn Trp Gly Met Arg Pro Lys Ala Met Arg Val
290 295 300

Lys Ile Phe Asn Ile Gln Val Lys Glu Val Thr Thr Ser Asn Gly Glu
305 310 315 320

Thr Thr Val Ala Asn Asn Leu Thr Ser Thr Val Gln Ile Phe Ala Asp
325 330 335

Ser Ser Tyr Glu Leu Pro Tyr Val Met Asp Ala Gly Gln Glu Gly Ser
340 345 350

Leu Pro Pro Phe Pro Asn Asp Val Phe Met Val Pro Gln Tyr Gly Tyr
355 360 365

Cys Gly Leu Val Thr Gly Asn Thr Ser Gln Gln Gln Thr Asp Arg Asn
370 375 380

Ala Phe Tyr Cys Leu Glu Tyr Phe Pro Ser Gln Met Leu Arg Thr Gly
385 390 395 400

Asn Asn Phe Glu Ile Thr Tyr Ser Phe Glu Lys Val Pro Phe His Ser
405 410 415

Met Tyr Ala His Ser Gln Ser Leu Asp Arg Leu Met Asn Pro Leu Ile

420

425

430

Asp Gln Tyr Leu Trp Gly Leu Gln Ser Thr Thr Thr Gly Thr Thr Leu
 435 440 445

Asn Ala Gly Thr Ala Thr Thr Asn Phe Thr Lys Leu Arg Pro Thr Asn
 450 455 460

Phe Ser Asn Phe Lys Lys Asn Trp Leu Pro Gly Pro Ser Ile Lys Gln
 465 470 475 480

Gln Gly Phe Ser Lys Thr Ala Asn Gln Asn Tyr Lys Ile Pro Ala Thr
 485 490 495

Gly Ser Asp Ser Leu Ile Lys Tyr Glu Thr His Ser Thr Leu Asp Gly
 500 505 510

Arg Trp Ser Ala Leu Thr Pro Gly Pro Pro Met Ala Thr Ala Gly Pro
 515 520 525

Ala Asp Ser Lys Phe Ser Asn Ser Gln Leu Ile Phe Ala Gly Pro Lys
 530 535 540

Gln Asn Gly Asn Thr Ala Thr Val Pro Gly Thr Leu Ile Phe Thr Ser
 545 550 555 560

Glu Glu Glu Leu Ala Ala Thr Asn Ala Thr Asp Thr Asp Met Trp Gly
 565 570 575

Asn Leu Pro Gly Gly Asp Gln Ser Asn Ser Asn Leu Pro Thr Val Asp
 580 585 590

Arg Leu Thr Ala Leu Gly Ala Val Pro Gly Met Val Trp Gln Asn Arg
 595 600 605

Asp Ile Tyr Tyr Gln Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp
 610 615 620

Gly His Phe His Pro Ser Pro Leu Ile Gly Gly Phe Gly Leu Lys His
 625 630 635 640

Pro Pro Pro Gln Ile Phe Ile Lys Asn Thr Pro Val Pro Ala Asn Pro
 645 650 655

Ala Thr Thr Phe Ser Ser Thr Pro Val Asn Ser Phe Ile Thr Gln Tyr
660 665 670

Ser Thr Gly Gln Val Ser Val Gln Ile Asp Trp Glu Ile Gln Lys Glu
675 680 685

Arg Ser Lys Arg Trp Asn Pro Glu Val Gln Phe Thr Ser Asn Tyr Gly
690 695 700

Gln Gln Asn Ser Leu Leu Trp Ala Pro Asp Ala Ala Gly Lys Tyr Thr
705 710 715 720

Glu Pro Arg Ala Ile Gly Thr Arg Tyr Leu Thr His His Leu
725 730

<210> 5
<211> 724
<212> PRT
<213> Adeno-Associated Virus

<400> 5

Met Ser Phe Val Asp His Pro Pro Asp Trp Leu Glu Glu Val Gly Glu
1 5 10 15

Gly Leu Arg Glu Phe Leu Gly Leu Glu Ala Gly Pro Pro Lys Pro Lys
20 25 30

Pro Asn Gln Gln His Gln Asp Gln Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Asn Tyr Leu Gly Pro Gly Asn Gly Leu Asp Arg Gly Glu Pro Val
50 55 60

Asn Arg Ala Asp Glu Val Ala Arg Glu His Asp Ile Ser Tyr Asn Glu
65 70 75 80

Gln Leu Glu Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
85 90 95

Ala Glu Phe Gln Glu Lys Leu Ala Asp Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro Phe
115 120 125

Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Thr Gly Lys Arg Ile
130 135 140

Asp Asp His Phe Pro Lys Arg Lys Lys Ala Arg Thr Glu Glu Asp Ser
145 150 155 160

Lys Pro Ser Thr Ser Ser Asp Ala Glu Ala Gly Pro Ser Gly Ser Gln
165 170 175

Gln Leu Gln Ile Pro Ala Gln Pro Ala Ser Ser Leu Gly Ala Asp Thr
180 185 190

Met Ser Ala Gly Gly Gly Gly Pro Leu Gly Asp Asn Asn Gln Gly Ala
195 200 205

Asp Gly Val Gly Asn Ala Ser Gly Asp Trp His Cys Asp Ser Thr Trp
210 215 220

Met Gly Asp Arg Val Val Thr Lys Ser Thr Arg Thr Trp Val Leu Pro
225 230 235 240

Ser Tyr Asn Asn His Gln Tyr Arg Glu Ile Lys Ser Gly Ser Val Asp
245 250 255

Gly Ser Asn Ala Asn Ala Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr
260 265 270

Phe Asp Phe Asn Arg Phe His Ser His Trp Ser Pro Arg Asp Trp Gln
275 280 285

Arg Leu Ile Asn Asn Tyr Trp Gly Phe Arg Pro Arg Ser Leu Arg Val
290 295 300

Lys Ile Phe Asn Ile Gln Val Lys Glu Val Thr Val Gln Asp Ser Thr
305 310 315 320

Thr Thr Ile Ala Asn Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp
325 330 335

Asp Asp Tyr Gln Leu Pro Tyr Val Val Gly Asn Gly Thr Glu Gly Cys
340 345 350

Leu Pro Ala Phe Pro Pro Gln Val Phe Thr Leu Pro Gln Tyr Gly Tyr
355 360 365

Ala Thr Leu Asn Arg Asp Asn Thr Glu Asn Pro Thr Glu Arg Ser Ser
370 375 380

Phe Phe Cys Leu Glu Tyr Phe Pro Ser Lys Met Leu Arg Thr Gly Asn
385 390 395 400

Asn Phe Glu Phe Thr Tyr Asn Phe Glu Glu Val Pro Phe His Ser Ser
405 410 415

Phe Ala Pro Ser Gln Asn Leu Phe Lys Leu Ala Asn Pro Leu Val Asp
420 425 430

Gln Tyr Leu Tyr Arg Phe Val Ser Thr Asn Asn Thr Gly Gly Val Gln
435 440 445

Phe Asn Lys Asn Leu Ala Gly Arg Tyr Ala Asn Thr Tyr Lys Asn Trp
450 455 460

Phe Pro Gly Pro Met Gly Arg Thr Gln Gly Trp Asn Leu Gly Ser Gly
465 470 475 480

Val Asn Arg Ala Ser Val Ser Ala Phe Ala Thr Thr Asn Arg Met Glu
485 490 495

Leu Glu Gly Ala Ser Tyr Gln Val Pro Pro Gln Pro Asn Gly Met Thr
500 505 510

Asn Asn Leu Gln Gly Ser Asn Thr Tyr Ala Leu Glu Asn Thr Met Ile
515 520 525

Phe Asn Ser Gln Pro Ala Asn Pro Gly Thr Thr Ala Thr Tyr Leu Glu
530 535 540

Gly Asn Met Leu Ile Thr Ser Glu Ser Glu Thr Gln Pro Val Asn Arg
545 550 555 560

Val Ala Tyr Asn Val Gly Gly Gln Met Ala Thr Asn Asn Gln Ser Ser
565 570 575

Thr Thr Ala Pro Ala Thr Gly Thr Tyr Asn Leu Gln Glu Ile Val Pro
580 585 590

Gly Ser Val Trp Met Glu Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp
595 600 605

Ala Lys Ile Pro Glu Thr Gly Ala His Phe His Pro Ser Pro Ala Met
610 615 620

Gly Gly Phe Gly Leu Lys His Pro Pro Pro Met Met Leu Ile Lys Asn
625 630 635 640

Thr Pro Val Pro Gly Asn Ile Thr Ser Phe Ser Asp Val Pro Val Ser
645 650 655

Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val Thr Val Glu Met Glu
660 665 670

Trp Glu Leu Lys Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln
675 680 685

Tyr Thr Asn Asn Tyr Asn Asp Pro Gln Phe Val Asp Phe Ala Pro Asp
690 695 700

Ser Thr Gly Glu Tyr Arg Thr Thr Arg Pro Ile Gly Thr Arg Tyr Leu
705 710 715 720

Thr Arg Pro Leu

<210> 6
<211> 736
<212> PRT
<213> Adeno-Associated Virus

<400> 6

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro

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

His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn
290 295 300

Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln
305 310 315 320

Val Lys Glu Val Thr Thr Asn Asp Gly Val Thr Thr Ile Ala Asn Asn
325 330 335

Leu Thr Ser Thr Val Gln Val Phe Ser Asp Ser Glu Tyr Gln Leu Pro
340 345 350

Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala
355 360 365

Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly
370 375 380

Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro
385 390 395 400

Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Thr Phe
405 410 415

Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp
420 425 430

Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Asn Arg
435 440 445

Thr Gln Asn Gln Ser Gly Ser Ala Gln Asn Lys Asp Leu Leu Phe Ser
450 455 460

Arg Gly Ser Pro Ala Gly Met Ser Val Gln Pro Lys Asn Trp Leu Pro
465 470 475 480

Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Lys Thr Asp Asn
485 490 495

Asn Asn Ser Asn Phe Thr Trp Thr Gly Ala Ser Lys Tyr Asn Leu Asn
500 505 510

Gly Arg Glu Ser Ile Ile Asn Pro Gly Thr Ala Met Ala Ser His Lys

515					520					525					
Asp	Asp	Lys	Asp	Lys	Phe	Phe	Pro	Met	Ser	Gly	Val	Met	Ile	Phe	Gly
530					535						540				
Lys	Glu	Ser	Ala	Gly	Ala	Ser	Asn	Thr	Ala	Leu	Asp	Asn	Val	Met	Ile
545					550					555					560
Thr	Asp	Glu	Glu	Glu	Ile	Lys	Ala	Thr	Asn	Pro	Val	Ala	Thr	Glu	Arg
				565					570					575	
Phe	Gly	Thr	Val	Ala	Val	Asn	Leu	Gln	Ser	Ser	Ser	Thr	Asp	Pro	Ala
			580					585					590		
Thr	Gly	Asp	Val	His	Val	Met	Gly	Ala	Leu	Pro	Gly	Met	Val	Trp	Gln
		595					600					605			
Asp	Arg	Asp	Val	Tyr	Leu	Gln	Gly	Pro	Ile	Trp	Ala	Lys	Ile	Pro	His
	610					615					620				
Thr	Asp	Gly	His	Phe	His	Pro	Ser	Pro	Leu	Met	Gly	Gly	Phe	Gly	Leu
625					630					635					640
Lys	His	Pro	Pro	Pro	Gln	Ile	Leu	Ile	Lys	Asn	Thr	Pro	Val	Pro	Ala
				645					650					655	
Asn	Pro	Pro	Ala	Glu	Phe	Ser	Ala	Thr	Lys	Phe	Ala	Ser	Phe	Ile	Thr
			660					665					670		
Gln	Tyr	Ser	Thr	Gly	Gln	Val	Ser	Val	Glu	Ile	Glu	Trp	Glu	Leu	Gln
		675					680					685			
Lys	Glu	Asn	Ser	Lys	Arg	Trp	Asn	Pro	Glu	Val	Gln	Tyr	Thr	Ser	Asn
	690					695					700				
Tyr	Ala	Lys	Ser	Ala	Asn	Val	Asp	Phe	Thr	Val	Asp	Asn	Asn	Gly	Leu
705					710					715					720
Tyr	Thr	Glu	Pro	Arg	Pro	Ile	Gly	Thr	Arg	Tyr	Leu	Thr	Arg	Pro	Leu
				725					730					735	

<210> 7
 <211> 736
 <212> PRT

<213> Adeno-Associated Virus

<400> 7

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Thr Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

Ala Thr Pro Ala Ala Val Gly Pro Thr Thr Met Ala Ser Gly Gly Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ala
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Ser Ala Ser Thr Gly Ala Ser Asn Asp Asn His
260 265 270

Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe
275 280 285

His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn
290 295 300

Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln
305 310 315 320

Val Lys Glu Val Thr Thr Asn Asp Gly Val Thr Thr Ile Ala Asn Asn
325 330 335

Leu Thr Ser Thr Val Gln Val Phe Ser Asp Ser Glu Tyr Gln Leu Pro
340 345 350

Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala
355 360 365

Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly
370 375 380

Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro
385 390 395 400

Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Thr Phe
405 410 415

Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp
420 425 430

Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Asn Arg
435 440 445

Thr Gln Asn Gln Ser Gly Ser Ala Gln Asn Lys Asp Leu Leu Phe Ser
450 455 460

Arg Gly Ser Pro Ala Gly Met Ser Val Gln Pro Lys Asn Trp Leu Pro
465 470 475 480

Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Lys Thr Asp Asn
485 490 495

Asn Asn Ser Asn Phe Thr Trp Thr Gly Ala Ser Lys Tyr Asn Leu Asn
500 505 510

Gly Arg Glu Ser Ile Ile Asn Pro Gly Thr Ala Met Ala Ser His Lys
515 520 525

Asp Asp Lys Asp Lys Phe Phe Pro Met Ser Gly Val Met Ile Phe Gly
530 535 540

Lys Glu Ser Ala Gly Ala Ser Asn Thr Ala Leu Asp Asn Val Met Ile
545 550 555 560

Thr Asp Glu Glu Glu Ile Lys Ala Thr Asn Pro Val Ala Thr Glu Arg
565 570 575

Phe Gly Thr Val Ala Val Asn Leu Gln Ser Ser Ser Thr Asp Pro Ala
580 585 590

Thr Gly Asp Val His Val Met Gly Ala Leu Pro Gly Met Val Trp Gln
595 600 605

Asp Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His
610 615 620

Thr Asp Gly His Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Leu
625 630 635 640

Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
645 650 655

Asn Pro Pro Ala Glu Phe Ser Ala Thr Lys Phe Ala Ser Phe Ile Thr
660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln
675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Val Gln Tyr Thr Ser Asn
690 695 700

Tyr Ala Lys Ser Ala Asn Val Asp Phe Thr Val Asp Asn Asn Gly Leu
705 710 715 720

Tyr Thr Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Pro Leu
725 730 735

<210> 8
<211> 737
<212> PRT
<213> Adeno-Associated Virus

<400> 8

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asn Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Ala Lys Lys Arg
130 135 140

Pro Val Glu Pro Ser Pro Gln Arg Ser Pro Asp Ser Ser Thr Gly Ile

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

Gly Ser Gln Ser Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Glu Phe Ser Tyr Ser
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ala
435 440 445

Arg Thr Gln Ser Asn Pro Gly Gly Thr Ala Gly Asn Arg Glu Leu Gln
450 455 460

Phe Tyr Gln Gly Gly Pro Ser Thr Met Ala Glu Gln Ala Lys Asn Trp
465 470 475 480

Leu Pro Gly Pro Cys Phe Arg Gln Gln Arg Val Ser Lys Thr Leu Asp
485 490 495

Gln Asn Asn Asn Ser Asn Phe Ala Trp Thr Gly Ala Thr Lys Tyr His
500 505 510

Leu Asn Gly Arg Asn Ser Leu Val Asn Pro Gly Val Ala Met Ala Thr
515 520 525

His Lys Asp Asp Glu Asp Arg Phe Phe Pro Ser Ser Gly Val Leu Ile
530 535 540

Phe Gly Lys Thr Gly Ala Thr Asn Lys Thr Thr Leu Glu Asn Val Leu
545 550 555 560

Met Thr Asn Glu Glu Glu Ile Arg Pro Thr Asn Pro Val Ala Thr Glu
565 570 575

Glu Tyr Gly Ile Val Ser Ser Asn Leu Gln Ala Ala Asn Thr Ala Ala
580 585 590

Gln Thr Gln Val Val Asn Asn Gln Gly Ala Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro

610		615		620
His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly				
625		630		635
Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro				
		645		650
Ala Asn Pro Pro Glu Val Phe Thr Pro Ala Lys Phe Ala Ser Phe Ile				
		660		665
Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu				
		675		680
Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser				
		690		700
Asn Phe Glu Lys Gln Thr Gly Val Asp Phe Ala Val Asp Ser Gln Gly				
705		710		715
Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn				
		725		730
				735

Leu

<210> 9
 <211> 738
 <212> PRT
 <213> Adeno-Associated Virus

<400> 9

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser				
1		5		10
				15
Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro				
		20		25
				30
Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro				
		35		40
				45
Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro				
		50		55
				60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Pro Ser Pro Gln Arg Ser Pro Asp Ser Ser Thr Gly Ile
145 150 155 160

Gly Lys Lys Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln
165 170 175

Thr Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro
180 185 190

Pro Ala Ala Pro Ser Gly Val Gly Pro Asn Thr Met Ala Ala Gly Gly
195 200 205

Gly Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser
210 215 220

Ser Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val
225 230 235 240

Ile Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His
245 250 255

Leu Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ala Thr Asn Asp
260 265 270

Asn Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn
275 280 285

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Arg Leu Ser Phe Lys Leu Phe Asn
305 310 315 320

Ile Gln Val Lys Glu Val Thr Gln Asn Glu Gly Thr Lys Thr Ile Ala
325 330 335

Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln
340 345 350

Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe
355 360 365

Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn
370 375 380

Asn Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr
385 390 395 400

Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Thr Tyr
405 410 415

Thr Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser
420 425 430

Leu Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu
435 440 445

Ser Arg Thr Gln Thr Thr Gly Gly Thr Ala Asn Thr Gln Thr Leu Gly
450 455 460

Phe Ser Gln Gly Gly Pro Asn Thr Met Ala Asn Gln Ala Lys Asn Trp
465 470 475 480

Leu Pro Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Thr Gly
485 490 495

Gln Asn Asn Asn Ser Asn Phe Ala Trp Thr Ala Gly Thr Lys Tyr His
500 505 510

Leu Asn Gly Arg Asn Ser Leu Ala Asn Pro Gly Ile Ala Met Ala Thr
515 520 525

His Lys Asp Asp Glu Glu Arg Phe Phe Pro Ser Asn Gly Ile Leu Ile
530 535 540

Phe Gly Lys Gln Asn Ala Ala Arg Asp Asn Ala Asp Tyr Ser Asp Val
545 550 555 560

Met Leu Thr Ser Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr
565 570 575

Glu Glu Tyr Gly Ile Val Ala Asp Asn Leu Gln Gln Gln Asn Thr Ala
580 585 590

Pro Gln Ile Gly Thr Val Asn Ser Gln Gly Ala Leu Pro Gly Met Val
595 600 605

Trp Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile
610 615 620

Pro His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe
625 630 635 640

Gly Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val
645 650 655

Pro Ala Asp Pro Pro Thr Thr Phe Asn Gln Ser Lys Leu Asn Ser Phe
660 665 670

Ile Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu
675 680 685

Leu Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr
690 695 700

Ser Asn Tyr Tyr Lys Ser Thr Ser Val Asp Phe Ala Val Asn Thr Glu
705 710 715 720

Gly Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg
725 730 735

Asn Leu

<210> 10
<211> 736

<212> PRT

<213> Adeno-Associated Virus

<400> 10

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln His Gln Asp Asn Ala Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Gly Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Leu Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ala Gly Ile Gly
145 150 155 160

Lys Ser Gly Ala Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Thr Glu Ser Val Pro Asp Pro Gln Pro Ile Gly Glu Pro Pro
180 185 190

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

Ala Pro Val Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser Ser

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

Lys Thr Ile Asn Gly Ser Gly Gln Asn Gln Gln Thr Leu Lys Phe Ser
450 455 460

Val Ala Gly Pro Ser Asn Met Ala Val Gln Gly Arg Asn Tyr Ile Pro
465 470 475 480

Gly Pro Ser Tyr Arg Gln Gln Arg Val Ser Thr Thr Val Thr Gln Asn
485 490 495

Asn Asn Ser Glu Phe Ala Trp Pro Gly Ala Ser Ser Trp Ala Leu Asn
500 505 510

Gly Arg Asn Ser Leu Met Asn Pro Gly Pro Ala Met Ala Ser His Lys
515 520 525

Glu Gly Glu Asp Arg Phe Phe Pro Leu Ser Gly Ser Leu Ile Phe Gly
530 535 540

Lys Gln Gly Thr Gly Arg Asp Asn Val Asp Ala Asp Lys Val Met Ile
545 550 555 560

Thr Asn Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu Ser
565 570 575

Tyr Gly Gln Val Ala Thr Asn His Gln Ser Ala Gln Ala Gln Ala Gln
580 585 590

Thr Gly Trp Val Gln Asn Gln Gly Ile Leu Pro Gly Met Val Trp Gln
595 600 605

Asp Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His
610 615 620

Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Met
625 630 635 640

Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
645 650 655

Asp Pro Pro Thr Ala Phe Asn Lys Asp Lys Leu Asn Ser Phe Ile Thr
660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln

675

680

685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn
 690 695 700

Tyr Tyr Lys Ser Asn Asn Val Glu Phe Ala Val Asn Thr Glu Gly Val
 705 710 715 720

Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
 725 730 735

<210> 11

<211> 736

<212> PRT

<213> Adeno-Associated Virus

<400> 11

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
 1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
 35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
 50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
 65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
 85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
 100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
 115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
 130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Thr Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

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

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Thr Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Leu Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Val
435 440 445

Arg Thr Gln Thr Thr Gly Thr Gly Gly Thr Gln Thr Leu Ala Phe Ser
450 455 460

Gln Ala Gly Pro Ser Ser Met Ala Asn Gln Ala Arg Asn Trp Val Pro
465 470 475 480

Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Thr Asn Gln Asn
485 490 495

Asn Asn Ser Asn Phe Ala Trp Thr Gly Ala Ala Lys Phe Lys Leu Asn
500 505 510

Gly Arg Asp Ser Leu Met Asn Pro Gly Val Ala Met Ala Ser His Lys
515 520 525

Asp Asp Asp Asp Arg Phe Phe Pro Ser Ser Gly Val Leu Ile Phe Gly
530 535 540

Lys Gln Gly Ala Gly Asn Asp Gly Val Asp Tyr Ser Gln Val Leu Ile
545 550 555 560

Thr Asp Glu Glu Glu Ile Lys Ala Thr Asn Pro Val Ala Thr Glu Glu
565 570 575

Tyr Gly Ala Val Ala Ile Asn Asn Gln Ala Ala Asn Thr Gln Ala Gln
580 585 590

Thr Gly Leu Val His Asn Gln Gly Val Ile Pro Gly Met Val Trp Gln
595 600 605

Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His
610 615 620

Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Leu
625 630 635 640

Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
645 650 655

Asp Pro Pro Leu Thr Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile Thr
660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln
675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn
690 695 700

Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Thr Glu Gly Val
705 710 715 720

Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
725 730 735

<210> 12
<211> 738
<212> PRT
<213> Adeno-Associated Virus

<400> 12

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Pro Ser Pro Gln Arg Ser Pro Asp Ser Ser Thr Gly Ile
145 150 155 160

Gly Lys Lys Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln
165 170 175

Thr Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Ile Gly Glu Pro
180 185 190

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

Gly Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser
210 215 220

Ser Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val
225 230 235 240

Ile Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His
245 250 255

Leu Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp
260 265 270

Asn Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn
275 280 285

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn

305		310		315		320									
Ile	Gln	Val	Lys	Glu	Val	Thr	Gln	Asn	Glu	Gly	Thr	Lys	Thr	Ile	Ala
				325					330					335	
Asn	Asn	Leu	Thr	Ser	Thr	Ile	Gln	Val	Phe	Thr	Asp	Ser	Glu	Tyr	Gln
			340					345					350		
Leu	Pro	Tyr	Val	Leu	Gly	Ser	Ala	His	Gln	Gly	Cys	Leu	Pro	Pro	Phe
		355					360					365			
Pro	Ala	Asp	Val	Phe	Met	Ile	Pro	Gln	Tyr	Gly	Tyr	Leu	Thr	Leu	Asn
	370					375					380				
Asn	Gly	Ser	Gln	Ala	Val	Gly	Arg	Ser	Ser	Phe	Tyr	Cys	Leu	Glu	Tyr
385					390					395					400
Phe	Pro	Ser	Gln	Met	Leu	Arg	Thr	Gly	Asn	Asn	Phe	Glu	Phe	Ser	Tyr
				405					410					415	
Gln	Phe	Glu	Asp	Val	Pro	Phe	His	Ser	Ser	Tyr	Ala	His	Ser	Gln	Ser
			420					425					430		
Leu	Asp	Arg	Leu	Met	Asn	Pro	Leu	Ile	Asp	Gln	Tyr	Leu	Tyr	Tyr	Leu
		435					440					445			
Ser	Arg	Thr	Gln	Ser	Thr	Gly	Gly	Thr	Ala	Gly	Thr	Gln	Gln	Leu	Leu
	450					455					460				
Phe	Ser	Gln	Ala	Gly	Pro	Asn	Asn	Met	Ser	Ala	Gln	Ala	Lys	Asn	Trp
465					470					475					480
Leu	Pro	Gly	Pro	Cys	Tyr	Arg	Gln	Gln	Arg	Val	Ser	Thr	Thr	Leu	Ser
				485					490					495	
Gln	Asn	Asn	Asn	Ser	Asn	Phe	Ala	Trp	Thr	Gly	Ala	Thr	Lys	Tyr	His
			500					505					510		
Leu	Asn	Gly	Arg	Asp	Ser	Leu	Val	Asn	Pro	Gly	Val	Ala	Met	Ala	Thr
		515					520					525			
His	Lys	Asp	Asp	Glu	Glu	Arg	Phe	Phe	Pro	Ser	Ser	Gly	Val	Leu	Met
	530					535					540				

Phe Gly Lys Gln Gly Ala Gly Lys Asp Asn Val Asp Tyr Ser Ser Val
545 550 555 560

Met Leu Thr Ser Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr
565 570 575

Glu Gln Tyr Gly Val Val Ala Asp Asn Leu Gln Gln Gln Asn Ala Ala
580 585 590

Pro Ile Val Gly Ala Val Asn Ser Gln Gly Ala Leu Pro Gly Met Val
595 600 605

Trp Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile
610 615 620

Pro His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe
625 630 635 640

Gly Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val
645 650 655

Pro Ala Asp Pro Pro Thr Thr Phe Ser Gln Ala Lys Leu Ala Ser Phe
660 665 670

Ile Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu
675 680 685

Leu Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr
690 695 700

Ser Asn Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Thr Asp
705 710 715 720

Gly Thr Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg
725 730 735

Asn Leu

<210> 13

<211> 736

<212> PRT

<213> Adeno-Associated Virus

<400> 13

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Lys Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

Ala Ala Pro Ser Gly Val Gly Ser Asn Thr Met Ala Ala Gly Gly Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ala
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Gly Ser Thr Asn Asp Asn Thr
260 265 270

Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe
275 280 285

His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn
290 295 300

Trp Gly Phe Arg Pro Lys Lys Leu Asn Phe Lys Leu Phe Asn Ile Gln
305 310 315 320

Val Lys Glu Val Thr Thr Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn
325 330 335

Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro
340 345 350

Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala
355 360 365

Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly
370 375 380

Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro
385 390 395 400

Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr Thr Phe
405 410 415

Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp
420 425 430

Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg
435 440 445

Thr Gln Thr Thr Ser Gly Thr Ala Gly Asn Arg Thr Leu Gln Phe Ser
450 455 460

Gln Ala Gly Pro Ser Ser Met Ala Asn Gln Ala Lys Asn Trp Leu Pro
465 470 475 480

Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Thr Asn Gln Asn
485 490 495

Asn Asn Ser Asn Phe Ala Trp Thr Gly Ala Thr Lys Tyr His Leu Asn
500 505 510

Gly Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Thr His Lys
515 520 525

Asp Asp Glu Asp Lys Phe Phe Pro Met Ser Gly Val Leu Ile Phe Gly
530 535 540

Lys Gln Gly Ala Gly Asn Ser Asn Val Asp Leu Asp Asn Val Met Ile
545 550 555 560

Thr Asn Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu Glu
565 570 575

Tyr Gly Thr Val Ala Thr Asn Leu Gln Ser Ala Asn Thr Ala Pro Ala
580 585 590

Thr Gly Thr Val Asn Ser Gln Gly Ala Leu Pro Gly Met Val Trp Gln
595 600 605

Asp Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His
610 615 620

Thr Asp Gly His Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Leu
625 630 635 640

Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
645 650 655

Asn Pro Pro Thr Thr Phe Ser Pro Ala Lys Phe Ala Ser Phe Ile Thr
660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln
675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn
690 695 700

Tyr Asn Lys Ser Thr Asn Val Asp Phe Ala Val Asp Thr Asn Gly Val
705 710 715 720

Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
725 730 735

<210> 14
<211> 736
<212> PRT
<213> Adeno-Associated Virus

<400> 14

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Thr Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

Ala Ala Pro Ser Gly Val Gly Ser Asn Thr Met Ala Ser Gly Gly Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Thr Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe

385		390		395		400									
Pro	Ser	Gln	Met	Leu	Arg	Thr	Gly	Asn	Asn	Phe	Gln	Phe	Ser	Tyr	Thr
				405					410					415	
Phe	Glu	Asp	Val	Pro	Phe	His	Ser	Ser	Tyr	Ala	His	Ser	Gln	Ser	Leu
			420					425					430		
Asp	Arg	Leu	Met	Asn	Pro	Leu	Ile	Asp	Gln	Tyr	Leu	Tyr	Tyr	Leu	Ser
		435					440					445			
Arg	Thr	Gln	Thr	Thr	Gly	Thr	Ala	Gly	Thr	Gln	Thr	Leu	Gln	Phe	Ser
	450					455					460				
Gln	Ala	Gly	Pro	Ser	Ser	Met	Ala	Asn	Gln	Ala	Arg	Asn	Trp	Val	Pro
465					470					475					480
Gly	Pro	Cys	Tyr	Arg	Gln	Gln	Arg	Val	Ser	Thr	Thr	Thr	Asn	Gln	Asn
				485					490					495	
Asn	Asn	Ser	Asn	Phe	Ala	Trp	Thr	Gly	Ala	Thr	Lys	Tyr	His	Leu	Asn
			500					505					510		
Gly	Arg	Asp	Ser	Leu	Met	Asn	Pro	Gly	Val	Ala	Met	Ala	Ser	His	Lys
		515					520					525			
Asp	Asp	Glu	Asp	Arg	Phe	Phe	Pro	Ser	Ser	Gly	Val	Leu	Ile	Phe	Gly
	530					535					540				
Lys	Gln	Gly	Ala	Gly	Asn	Asp	Asn	Val	Asp	Tyr	Ser	Gln	Val	Met	Ile
545					550					555					560
Thr	Asn	Glu	Glu	Glu	Ile	Lys	Thr	Thr	Asn	Pro	Val	Ala	Thr	Glu	Glu
				565					570					575	
Tyr	Gly	Ala	Val	Ala	Thr	Asn	Asn	Gln	Ser	Ala	Asn	Thr	Gln	Ala	Gln
			580					585					590		
Thr	Gly	Leu	Val	His	Asn	Gln	Gly	Val	Leu	Pro	Gly	Met	Val	Trp	Gln
		595					600					605			
Asn	Arg	Asp	Val	Tyr	Leu	Gln	Gly	Pro	Ile	Trp	Ala	Lys	Ile	Pro	His
	610					615					620				

Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Leu
625 630 635 640

Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
645 650 655

Asp Pro Pro Thr Thr Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile Thr
660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln
675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn
690 695 700

Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Thr Glu Gly Val
705 710 715 720

Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
725 730 735

<210> 15
<211> 742
<212> PRT
<213> Papio hamadryas

<400> 15

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln His Gln Asp Asn Ala Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Gly Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Gln Arg Leu Ala Thr Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Ile Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Leu Glu Lys Thr Pro Asn Arg Pro Thr Asn Pro Asp Ser Gly Lys
145 150 155 160

Ala Pro Ala Lys Lys Lys Gln Lys Asp Gly Glu Thr Ala Asp Ser Ala
165 170 175

Arg Arg Thr Leu Asp Phe Glu Asp Ser Gly Ala Gly Asp Gly Pro Pro
180 185 190

Glu Gly Ser Ser Ser Gly Glu Met Ser His Asp Ala Glu Met Arg Ala
195 200 205

Ala Pro Gly Gly Asn Ala Val Glu Ala Gly Gln Gly Ala Asp Gly Val
210 215 220

Gly Asn Ala Ser Gly Asp Trp His Cys Asp Ser Thr Trp Ser Glu Gly
225 230 235 240

Arg Val Thr Thr Thr Ser Thr Arg Thr Trp Val Leu Pro Thr Tyr Asn
245 250 255

Asn His Leu Tyr Leu Arg Ile Gly Thr Thr Ala Asn Ser Asn Thr Tyr
260 265 270

Asn Gly Phe Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
290 295 300

Gly Leu Arg Pro Lys Ser Met Arg Val Lys Ile Phe Asn Ile Gln Val
305 310 315 320

Lys Glu Val Thr Thr Ser Asn Gly Glu Thr Thr Val Ala Asn Asn Leu
325 330 335

Thr Ser Thr Val Gln Ile Phe Ala Asp Ser Thr Tyr Glu Leu Pro Tyr
340 345 350

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

Val Phe Met Val Pro Gln Tyr Gly Tyr Cys Gly Val Val Thr Gly Glu
370 375 380

Asn Gln Asn Gln Thr Asp Arg Asn Ala Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Glu Val Ser Tyr Gln
405 410 415

Phe Glu Lys Val Pro Phe His Ser Met Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Met Met Asn Pro Leu Leu Asp Gln Tyr Leu Trp His Pro Gln
435 440 445

Ser Thr Thr Thr Gly Asn Ser Leu Asn Gln Gly Thr Ala Thr Thr Thr
450 455 460

Tyr Gly Lys Ile Thr Thr Gly Asp Phe Ala Tyr Tyr Arg Lys Asn Trp
465 470 475 480

Leu Pro Gly Ala Cys Ile Lys Gln Gln Lys Phe Ser Lys Asn Ala Ser
485 490 495

Gln Asn Tyr Lys Ile Pro Ala Ser Gly Gly Asp Ala Leu Leu Lys Tyr
500 505 510

Asp Thr His Thr Thr Ser Asn Gly Arg Trp Ser Asn Met Ala Pro Gly
515 520 525

Pro Pro Met Ala Thr Ala Gly Ala Gly Asp Ser Asp Phe Ser Asn Ser
530 535 540

Gln Leu Ile Phe Ala Gly Pro Asn Gln Ser Gly Asn Thr Thr Thr Ser
545 550 555 560

Ser Asn Asn Leu Leu Phe Thr Ser Glu Glu Glu Ile Ala Thr Thr Asn
565 570 575

Pro Arg Asp Thr Asp Met Phe Gly Gln Ile Ala Asp Asn Asn Gln Asn
580 585 590

Ala Thr Thr Ala Pro His Ile Ala Asn Leu Asp Ala Met Gly Ile Val
595 600 605

Pro Gly Met Val Trp Gln Asn Arg Asp Ile Tyr Tyr Leu Gly Pro Ile
610 615 620

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

Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile Phe Ile Lys
645 650 655

Asn Thr Pro Val Pro Ala Asn Pro Asn Thr Thr Phe Ser Ala Ala Arg
660 665 670

Ile Asn Ser Phe Leu Thr Gln Tyr Ser Thr Gly Gln Val Ala Val Gln
675 680 685

Ile Asp Trp Glu Ile Gln Lys Glu His Ser Lys Arg Trp Asp Pro Glu
690 695 700

Val Gln Phe Thr Ser Asn Tyr Gly Thr Gln Asn Ser Met Leu Trp Ala
705 710 715 720

Pro Asp Asn Ala Gly Asn Tyr His Glu Pro Arg Ala Ile Gly Ser Arg
725 730 735

Phe Leu Thr His His Leu
740

<210> 16

<211> 739

<212> PRT

<213> Papio hamadryas

<400> 16

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser

1		5		10		15											
Glu	Gly	Ile	Arg	Glu	Trp	Trp	Ala	Leu	Lys	Pro	Gly	Ala	Pro	Gln	Pro		
			20					25					30				
Lys	Ala	Asn	Gln	Gln	His	Gln	Gly	Asn	Ser	Arg	Gly	Leu	Val	Leu	Pro		
		35					40					45					
Gly	Tyr	Lys	Tyr	Leu	Gly	Leu	Phe	Asn	Gly	Leu	Asp	Lys	Gly	Glu	Pro		
	50					55					60						
Val	Asn	Glu	Ala	Asp	Ala	Ala	Ala	Leu	Glu	His	Asp	Lys	Ala	Tyr	Asp		
65					70					75					80		
Lys	Gln	Leu	Glu	Gln	Gly	Asp	Asp	Pro	Tyr	Leu	Lys	Tyr	Asn	His	Ala		
				85					90					95			
Asp	Ala	Glu	Phe	Gln	Glu	Arg	Leu	Gln	Glu	Asp	Thr	Ser	Phe	Gly	Gly		
			100					105					110				
Asn	Leu	Gly	Arg	Ala	Val	Phe	Gln	Ala	Lys	Lys	Arg	Ile	Leu	Glu	Pro		
		115					120					125					
Leu	Gly	Leu	Val	Glu	Glu	Ala	Ala	Lys	Thr	Ala	Pro	Gly	Lys	Lys	Arg		
	130					135					140						
Pro	Leu	Glu	Lys	Thr	Pro	Asn	Gln	Pro	Thr	Asp	Thr	Gln	Ala	Ala	Gly		
145					150					155					160		
Gln	Thr	Pro	Ala	Lys	Lys	Arg	Pro	Gln	Gly	Glu	Gln	Ser	Gly	Asp	Ser		
				165					170					175			
Ala	Arg	Arg	Gln	Leu	Asp	Phe	Gly	Pro	Gln	Pro	Ala	Ala	Pro	Ile	Gly		
			180					185					190				
Gln	Pro	Pro	Ala	Ala	Pro	Pro	Pro	Val	Gly	Ser	Asn	Thr	Met	Ala	Ser		
		195					200					205					
Gly	Gly	Gly	Gly	Pro	Met	Ala	Asp	Asp	Asn	Gln	Gly	Ala	Asp	Gly	Val		
	210					215					220						
Gly	Asn	Ala	Ser	Gly	Asn	Trp	His	Cys	Asp	Ser	Thr	Trp	Leu	Gly	Asp		
225					230					235					240		

Arg Val Ile Thr Thr Ser Thr Arg Thr Trp Val Leu Pro Thr Tyr Asn
245 250 255

Asn His Ile Tyr Lys Gln Ile Ser Ser Glu Ser Gly Ala Thr Asn Asp
260 265 270

Asn His Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn
275 280 285

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Ile Phe Asn
305 310 315 320

Val Gln Val Lys Glu Val Thr Gln Ile Glu Gly Gly Ser Thr Ile Ala
325 330 335

Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Ala Asp Ser Glu Tyr Gln
340 345 350

Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe
355 360 365

Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn
370 375 380

Asn Gly Ser Gln Ser Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr
385 390 395 400

Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr
405 410 415

Thr Phe Glu Ser Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser
420 425 430

Leu Asp Arg Ile Met Asn Pro Leu Val Asp Gln Tyr Leu Tyr Tyr Leu
435 440 445

Ala Arg Thr Gln Thr Gly Thr Gly Ser Thr Thr Ser Asn Thr Arg Gln
450 455 460

Leu Gln Phe Tyr Gln Ala Gly Pro Ser Asn Met Ala Asp Gln Ser Arg

465						470											480
Asn	Trp	Leu	Pro	Gly	Pro	Met	Tyr	Arg	Gln	Gln	Arg	Val	Ser	Lys	Thr		
				485					490					495			
Leu	Asp	Gln	Asn	Ser	Asn	Thr	Asn	Phe	Ala	Trp	Thr	Ala	Ala	Ser	Lys		
			500					505					510				
Tyr	Asn	Leu	Asn	Gly	Arg	Lys	Ser	Leu	Ala	Asn	Pro	Gly	Ile	Ala	Met		
	515						520					525					
Ala	Thr	His	Lys	Asp	Asp	Glu	Glu	Arg	Phe	Phe	Pro	Gln	His	Gly	Val		
	530					535					540						
Leu	Val	Phe	Gly	Gln	Thr	Asn	Ala	Thr	Asn	Lys	Thr	Thr	Leu	Asp	Asn		
545					550					555					560		
Val	Leu	Val	Thr	Ser	Glu	Glu	Glu	Ile	Lys	Ala	Thr	Asn	Pro	Val	Ala		
				565					570					575			
Thr	Glu	Glu	Tyr	Gly	Thr	Val	Ser	Ser	Asn	Leu	Gln	Ala	Ser	Asn	Thr		
			580					585					590				
Asn	Pro	Thr	Thr	Glu	Thr	Val	Asn	Asn	Gln	Gly	Ile	Leu	Pro	Gly	Met		
		595					600					605					
Val	Trp	Gln	Asp	Arg	Asp	Val	Tyr	Leu	Gln	Gly	Pro	Ile	Trp	Ala	Lys		
	610					615					620						
Ile	Pro	His	Thr	Asp	Gly	His	Phe	His	Pro	Ser	Pro	Leu	Met	Gly	Gly		
625					630					635					640		
Phe	Gly	Leu	Lys	His	Pro	Pro	Pro	Gln	Ile	Leu	Ile	Lys	Asn	Thr	Pro		
				645					650					655			
Val	Pro	Ala	Asn	Pro	Pro	Glu	Thr	Phe	Thr	Thr	Ser	Lys	Phe	Ala	Ser		
			660					665					670				
Tyr	Ile	Thr	Gln	Tyr	Ser	Thr	Gly	Gln	Val	Ser	Val	Glu	Ile	Glu	Trp		
	675						680					685					
Glu	Leu	Gln	Lys	Glu	Asn	Ser	Lys	Arg	Trp	Asn	Pro	Glu	Ile	Gln	Tyr		
	690					695					700						

Thr Ser Asn Tyr Ala Lys Ser Asn Asn Val Glu Phe Ser Val Asp Ala
705 710 715 720

Ala Gly Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr
725 730 735

Arg Asn Leu

<210> 17
<211> 739
<212> PRT
<213> Papio hamadryas

<400> 17

Val Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln His Gln Asp Asn Ser Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Lys Gln Leu Glu Gln Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Leu Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Ile Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

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

Gln Thr Pro Ala Lys Lys Arg Pro Gln Gly Glu Gln Ser Gly Asp Ser
165 170 175

Ala Arg Arg Gln Leu Asp Phe Asp Pro Gln Pro Ala Ala Pro Ile Gly
180 185 190

Gln Pro Pro Ala Ala Pro Pro Pro Val Gly Ser Asn Thr Met Ala Ser
195 200 205

Gly Gly Gly Gly Pro Met Ala Asp Asp Asn Gln Gly Ala Asp Gly Val
210 215 220

Gly Asn Ala Ser Gly Asn Trp His Arg Asp Ser Thr Trp Leu Gly Asp
225 230 235 240

Arg Val Ile Thr Thr Ser Thr Arg Thr Trp Val Leu Pro Thr Tyr Asn
245 250 255

Asn His Ile Tyr Lys Gln Ile Ser Ser Glu Ser Gly Ala Thr Asn Asp
260 265 270

Asn His Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn
275 280 285

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Ile Phe Asn
305 310 315 320

Ile Gln Val Lys Glu Val Thr Gln Ile Glu Gly Gly Ser Thr Ile Ala
325 330 335

Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Ala Asp Ser Glu Tyr Gln
340 345 350

Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe
355 360 365

Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn
370 375 380

Asn Gly Ser Gln Ser Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr
385 390 395 400

Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr
405 410 415

Thr Phe Glu Ser Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser
420 425 430

Leu Asp Arg Ile Met Asn Pro Leu Val Asp Gln Tyr Leu Tyr Tyr Leu
435 440 445

Ala Arg Thr Gln Thr Gly Thr Gly Ser Thr Thr Ser Asn Thr Arg Gln
450 455 460

Leu Gln Phe Tyr Gln Ala Gly Pro Ser Asn Met Ala Asp Gln Ser Arg
465 470 475 480

Asn Trp Leu Pro Gly Pro Met Tyr Arg Gln Gln Arg Val Ser Lys Thr
485 490 495

Leu Asp Gln Asn Ser Asn Thr Asn Phe Ala Trp Thr Ala Ala Ser Lys
500 505 510

Tyr Asn Leu Asn Gly Arg Lys Ser Leu Ala Asn Pro Gly Ile Ala Met
515 520 525

Ala Thr His Lys Asp Asp Glu Glu Arg Phe Phe Pro Gln His Gly Val
530 535 540

Leu Val Phe Gly Gln Thr Asn Ala Thr Asn Lys Thr Thr Leu Asp Asn
545 550 555 560

Val Leu Ile Thr Ser Glu Glu Glu Ile Lys Ala Thr Asn Pro Val Ala
565 570 575

Thr Glu Glu Tyr Gly Thr Val Ser Ser Asn Leu Gln Ala Ser Asn Thr
580 585 590

Asn Pro Thr Thr Glu Thr Val Asn Ser Gln Gly Ile Leu Pro Gly Met
595 600 605

Val Trp Gln Asp Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys
610 615 620

Ile Pro His Thr Asp Gly His Phe His Pro Ser Pro Leu Met Gly Gly
625 630 635 640

Phe Gly Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro
645 650 655

Val Pro Ala Asn Pro Pro Glu Thr Phe Thr Thr Ser Lys Phe Ala Ser
660 665 670

Tyr Ile Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp
675 680 685

Glu Leu Gln Lys Glu Asn Gly Lys Arg Trp Asn Pro Glu Ile Gln Tyr
690 695 700

Thr Ser Asn Tyr Ala Lys Ser Asn Asn Val Glu Phe Ser Val Asp Ala
705 710 715 720

Ala Gly Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr
725 730 735

Arg Asn Leu

<210> 18
<211> 739
<212> PRT
<213> Papio hamadryas

<400> 18

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln His Gln Asp Asn Ser Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp

65

70

75

80

Lys Gln Leu Glu Gln Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Ile Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Arg Arg
130 135 140

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

Gln Thr Pro Ala Lys Lys Arg Pro Gln Gly Glu Gln Ser Gly Asp Ser
165 170 175

Ala Arg Arg Gln Leu Asp Phe Asp Pro Gln Pro Ala Ala Pro Ile Gly
180 185 190

Gln Pro Pro Ala Ala Pro Ser Pro Val Gly Ser Asn Thr Met Ala Ser
195 200 205

Gly Gly Gly Gly Pro Met Ala Asp Asp Asn Gln Gly Ala Asp Gly Val
210 215 220

Gly Asn Ala Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp
225 230 235 240

Arg Val Ile Thr Thr Ser Thr Arg Thr Trp Val Leu Pro Thr Tyr Asn
245 250 255

Asn His Ile Tyr Lys Gln Ile Ser Ser Glu Ser Gly Ala Thr Asn Asp
260 265 270

Asn His Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn
275 280 285

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Ile Phe Asn
305 310 315 320

Ile Gln Val Lys Glu Val Thr Gln Ile Glu Gly Gly Ser Thr Ile Ala
325 330 335

Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Ala Asp Ser Glu Tyr Gln
340 345 350

Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe
355 360 365

Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn
370 375 380

Asn Gly Ser Gln Ser Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr
385 390 395 400

Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr
405 410 415

Thr Phe Glu Ser Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser
420 425 430

Leu Asp Arg Ile Met Asn Pro Leu Val Asp Gln Cys Leu Tyr Tyr Leu
435 440 445

Ala Arg Thr Gln Thr Gly Thr Gly Ser Thr Thr Ser Asn Thr Arg Gln
450 455 460

Leu Gln Phe Tyr Gln Ala Gly Pro Ser Asn Met Ala Asp Gln Ser Arg
465 470 475 480

Asn Trp Leu Pro Gly Pro Met Tyr Arg Gln Gln Arg Val Ser Lys Thr
485 490 495

Leu Asp Gln Asn Ser Asn Thr Asn Phe Ala Trp Thr Ala Ala Ser Lys
500 505 510

Tyr Asn Leu Asn Gly Arg Lys Ser Leu Ala Asn Pro Gly Ile Ala Met
515 520 525

Ala Thr His Lys Asp Asp Glu Glu Arg Phe Phe Pro Gln His Gly Val

530		535		540
Leu Val Phe Gly Gln Thr Asn Ala Thr Asn Lys Thr Thr Leu Asp Asn				
545		550		555
Val Leu Ile Thr Ser Glu Glu Glu Ile Lys Ala Thr Asn Pro Val Ala				
		565		570
Thr Glu Glu Tyr Gly Thr Val Ser Ser Asn Leu Gln Ala Ser Asn Thr				
		580		585
Asn Pro Thr Thr Glu Thr Val Asn Asn Gln Gly Ile Leu Pro Gly Met				
		595		600
Val Trp Gln Asp Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys				
		610		615
Ile Pro His Thr Asp Gly His Phe His Pro Ser Pro Leu Met Gly Gly				
		625		630
Phe Gly Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro				
		645		650
Val Pro Ala Asn Pro Pro Glu Thr Phe Thr Thr Ser Lys Phe Ala Ser				
		660		665
Tyr Ile Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp				
		675		680
Glu Leu Gln Lys Glu Asp Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr				
		690		695
Thr Ser Asn Tyr Ala Lys Ser Asn Asn Val Glu Phe Ser Val Asp Ala				
		705		710
Ala Gly Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr				
		725		730
Arg Asn Leu				

<210> 19
 <211> 739
 <212> PRT

<213> Papio hamadryas

<400> 19

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln His Gln Asp Asn Ser Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Lys Gln Leu Glu Gln Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Ile Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

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

Gln Thr Pro Ala Lys Lys Arg Pro Gln Gly Gly Gln Ser Gly Asp Ser
165 170 175

Ala Arg Arg Gln Leu Asp Phe Asp Pro Gln Pro Ala Ala Pro Ile Gly
180 185 190

Gln Pro Pro Ala Ala Pro Ser Pro Val Gly Ser Asn Thr Met Ala Ser
195 200 205

Gly Gly Gly Gly Pro Met Ala Asp Asp Asn Gln Gly Ala Asp Gly Val
210 215 220

Gly Asn Ala Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp
225 230 235 240

Arg Val Ile Thr Thr Ser Thr Arg Thr Trp Val Leu Pro Thr Tyr Asn
245 250 255

Asn His Ile Tyr Lys Gln Ile Ser Ser Glu Ser Gly Ala Thr Asn Asp
260 265 270

Asn His Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn
275 280 285

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Ile Phe Asn
305 310 315 320

Ile Gln Val Lys Glu Val Thr Gln Ile Glu Gly Gly Ser Thr Ile Ala
325 330 335

Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Ala Asp Ser Glu Tyr Leu
340 345 350

Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe
355 360 365

Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn
370 375 380

Asn Gly Ser Gln Ser Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr
385 390 395 400

Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr
405 410 415

Thr Phe Glu Ser Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser
420 425 430

Leu Asp Arg Ile Met Asn Pro Leu Val Asp Gln Tyr Leu Tyr Tyr Leu
435 440 445

Ala Arg Thr Gln Thr Gly Thr Gly Ser Thr Thr Ser Asn Thr Arg Gln
450 455 460

Leu Gln Phe Tyr Gln Ala Gly Pro Ser Asn Met Ala Asp Gln Ser Arg
465 470 475 480

Asn Trp Leu Pro Gly Pro Met Tyr Arg Gln Gln Arg Val Ser Lys Thr
485 490 495

Leu Asp Gln Asn Ser Asn Thr Asn Phe Ala Trp Thr Ala Ala Ser Lys
500 505 510

Tyr Asn Leu Asn Gly Arg Lys Ser Leu Ala Asn Pro Gly Ile Ala Met
515 520 525

Ala Thr His Lys Asp Asp Glu Glu Arg Phe Phe Pro Gln His Gly Val
530 535 540

Leu Val Phe Gly Gln Thr Asn Ala Thr Asn Lys Thr Thr Leu Asp Asn
545 550 555 560

Val Leu Ile Thr Ser Glu Glu Glu Ile Lys Ala Thr Asn Pro Val Ala
565 570 575

Thr Glu Glu Tyr Gly Thr Val Ser Ser Asn Leu Gln Ala Ser Asn Thr
580 585 590

Asn Pro Thr Thr Glu Thr Val Asn Asn Gln Gly Ile Leu Pro Gly Met
595 600 605

Val Trp Gln Asp Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys
610 615 620

Ile Pro His Thr Asp Gly His Phe His Pro Ser Pro Leu Met Gly Gly
625 630 635 640

Phe Gly Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro
645 650 655

Val Pro Ala Asn Pro Pro Glu Thr Phe Thr Thr Ser Lys Phe Ala Ser
660 665 670

Tyr Ile Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp
675 680 685

Glu Leu Gln Lys Glu Asp Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr
690 695 700

Thr Ser Asn Tyr Ala Lys Ser Asn Asn Val Glu Phe Ser Val Asp Ala
705 710 715 720

Ala Gly Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr
725 730 735

Arg Asn Leu

<210> 20
<211> 742
<212> PRT
<213> Papio hamadryas

<400> 20

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln His Gln Asp Asn Ala Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Gly Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Gln Arg Leu Ala Thr Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Ile Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Val Lys Thr Ala Pro Gly Lys Lys His

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

Val Phe Met Val Pro Gln Tyr Gly Tyr Cys Gly Val Val Thr Gly Glu
370 375 380

Asn Gln Asn Gln Thr Asp Arg Asn Ala Phe Tyr Cys Leu Glu Cys Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Glu Ile Ser Tyr Gln
405 410 415

Phe Glu Lys Val Pro Phe His Ser Met Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Met Met Asn Pro Leu Leu Asp Gln Tyr Leu Trp His Leu Gln
435 440 445

Ser Thr Thr Thr Gly Asn Ser Leu Asn Gln Gly Thr Ala Thr Thr Thr
450 455 460

Tyr Gly Lys Ile Thr Thr Gly Asp Phe Ala Tyr Tyr Arg Lys Asn Trp
465 470 475 480

Leu Pro Gly Ala Cys Ile Lys Gln Gln Lys Phe Ser Lys Asn Ala Ser
485 490 495

Gln Asn Tyr Lys Ile Pro Ala Ser Gly Gly Asp Ala Leu Leu Lys Tyr
500 505 510

Asp Thr His Thr Thr Leu Asn Gly Arg Trp Ser Asn Met Ala Pro Gly
515 520 525

Pro Pro Met Ala Thr Ala Gly Ala Gly Asp Ser Asp Phe Ser Asn Ser
530 535 540

Gln Leu Ile Phe Ala Gly Pro Asn Gln Ser Gly Asn Thr Thr Thr Ser
545 550 555 560

Ser Asn Asn Leu Leu Phe Thr Ser Glu Glu Glu Ile Ala Ala Thr Asn
565 570 575

Pro Arg Asp Thr Asp Met Phe Gly Gln Ile Ala Asp Asn Asn Gln Asn
580 585 590

Ala Thr Thr Ala Pro His Ile Ala Asn Leu Asp Ala Met Gly Ile Val

595

600

605

Pro Gly Met Val Trp Gln Asn Arg Asp Ile Tyr Tyr Gln Gly Pro Ile
610 615 620

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

Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile Phe Ile Lys
645 650 655

Asn Thr Pro Val Pro Ala Asn Pro Asn Thr Thr Phe Ser Ala Ala Arg
660 665 670

Ile Asn Ser Phe Leu Thr Gln Tyr Ser Thr Gly Gln Val Ala Val Gln
675 680 685

Ile Asp Trp Glu Ile Gln Lys Glu His Ser Lys Arg Trp Asn Pro Glu
690 695 700

Val Gln Phe Thr Ser Asn Tyr Gly Thr Gln Asn Ser Met Leu Trp Ala
705 710 715 720

Pro Asp Asn Ala Gly Asn Tyr His Glu Pro Arg Ala Ile Gly Ser Arg
725 730 735

Phe Leu Thr His His Leu
740

<210> 21

<211> 742

<212> PRT

<213> Papio hamadryas

<400> 21

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln His Gln Asp Asn Ala Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Gly Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Gln Arg Leu Ala Thr Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Ile Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Leu Glu Lys Thr Pro Asn Arg Pro Thr Asn Pro Asp Ser Gly Lys
145 150 155 160

Ala Pro Ala Lys Lys Lys Gln Lys Asp Gly Glu Thr Ala Asp Ser Ala
165 170 175

Arg Arg Thr Leu Asp Phe Glu Asp Ser Gly Ala Gly Asp Gly Pro Pro
180 185 190

Glu Gly Ser Ser Ser Gly Glu Met Ser His Asp Ala Glu Met Arg Ala
195 200 205

Ala Pro Gly Gly Asn Ala Val Glu Ala Gly Gln Gly Ala Asp Gly Val
210 215 220

Gly Asn Ala Ser Gly Gly Trp His Cys Asp Ser Thr Trp Ser Glu Gly
225 230 235 240

Arg Val Thr Thr Thr Ser Thr Arg Thr Trp Val Leu Pro Thr Tyr Asn
245 250 255

Asn His Leu Tyr Leu Arg Ile Gly Thr Thr Ala Asn Ser Asn Thr Tyr
260 265 270

Asn Gly Phe Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
290 295 300

Gly Leu Arg Pro Lys Ser Met Arg Val Lys Ile Phe Asn Ile Gln Val
305 310 315 320

Lys Glu Val Thr Thr Ser Asn Gly Glu Thr Thr Val Ala Asn Asn Leu
325 330 335

Thr Ser Thr Val Gln Ile Phe Ala Asp Ser Thr Tyr Glu Leu Pro Tyr
340 345 350

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

Val Phe Met Val Pro Gln Tyr Gly Tyr Cys Gly Val Val Thr Gly Glu
370 375 380

Asn Gln Asn Gln Thr Asp Arg Asn Ala Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Glu Ile Ser Tyr Gln
405 410 415

Phe Glu Lys Val Pro Phe His Ser Met Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Met Met Asn Pro Leu Leu Asp Gln Tyr Leu Trp His Leu Gln
435 440 445

Ser Thr Thr Thr Gly Asn Ser Leu Asn Gln Gly Thr Ala Thr Thr Thr
450 455 460

Tyr Gly Lys Ile Thr Thr Gly Asp Phe Ala Tyr Tyr Arg Lys Asn Trp
465 470 475 480

Leu Pro Gly Ala Cys Ile Lys Gln Gln Lys Phe Ser Lys Asn Ala Ser
485 490 495

Gln Asn Tyr Lys Ile Pro Ala Ser Gly Gly Asp Ala Leu Leu Lys Tyr
500 505 510

Asp Thr His Thr Thr Leu Asn Gly Arg Trp Ser Ser Met Ala Pro Gly
515 520 525

Pro Pro Met Ala Thr Ala Gly Ala Gly Asp Ser Asp Phe Ser Asn Ser
530 535 540

Gln Leu Ile Phe Ala Gly Pro Asn Gln Ser Gly Asn Thr Thr Thr Ser
545 550 555 560

Ser Asn Asn Leu Leu Phe Thr Ser Glu Glu Glu Ile Ala Thr Thr Asn
565 570 575

Pro Arg Asp Thr Asp Met Phe Gly Gln Ile Ala Asp Asn Asn Gln Asn
580 585 590

Ala Thr Thr Ala Pro His Ile Ala Asn Leu Asp Ala Met Gly Ile Val
595 600 605

Pro Gly Met Val Trp Gln Asn Arg Asp Ile Tyr Tyr Gln Gly Pro Ile
610 615 620

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

Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile Phe Ile Lys
645 650 655

Asn Thr Pro Val Pro Ala Asn Pro Asn Thr Thr Phe Ser Ala Ala Arg
660 665 670

Ile Asn Ser Phe Leu Thr Gln Tyr Ser Thr Gly Gln Val Ala Val Gln
675 680 685

Ile Asp Trp Glu Ile Gln Lys Glu His Ser Lys Arg Trp Asn Pro Glu
690 695 700

Val Gln Phe Thr Ser Asn Tyr Gly Thr Gln Asn Ser Met Leu Trp Ala
705 710 715 720

Pro Gly Asn Ala Gly Asn His His Glu Pro Arg Ala Ile Gly Ser Arg
725 730 735

Phe Leu Thr His His Leu
740

<210> 22
<211> 742
<212> PRT
<213> Papio hamadryas

<400> 22

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln His Gln Asp Asn Ala Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Gly Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Gln Arg Leu Ala Thr Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Ile Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Leu Glu Lys Thr Pro Asn Arg Pro Thr Asn Pro Asp Ser Gly Arg
145 150 155 160

Ala Pro Ala Lys Lys Lys Gln Lys Asp Gly Glu Thr Ala Asp Ser Ala
165 170 175

Arg Arg Thr Leu Asp Phe Glu Asp Ser Gly Ala Gly Asp Gly Pro Pro
180 185 190

Glu Gly Ser Ser Ser Gly Glu Met Ser His Asp Ala Glu Met Arg Ala

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

Asp Arg Met Met Asn Pro Leu Leu Asp Gln Tyr Leu Trp His Leu Gln
435 440 445

Ser Thr Thr Thr Gly Asn Ser Leu Asn Gln Gly Thr Ala Thr Thr Thr
450 455 460

Tyr Gly Lys Ile Thr Thr Gly Asp Phe Ala Tyr Tyr Arg Lys Asn Trp
465 470 475 480

Leu Pro Gly Ala Cys Ile Lys Gln Gln Lys Phe Ser Lys Asn Ala Ser
485 490 495

Gln Asn Tyr Lys Ile Pro Ala Ser Gly Gly Asp Ala Leu Leu Lys Tyr
500 505 510

Asp Thr His Thr Thr Leu Asn Gly Arg Trp Ser Asn Met Ala Pro Gly
515 520 525

Pro Pro Met Ala Thr Ala Gly Ala Gly Asp Ser Asp Phe Ser Asn Ser
530 535 540

Gln Leu Ile Phe Ala Gly Pro Asn Gln Ser Gly Asn Thr Thr Thr Ser
545 550 555 560

Ser Asn Asn Leu Leu Leu Thr Ser Glu Glu Glu Ile Ala Thr Thr Asn
565 570 575

Pro Arg Asp Thr Asp Met Phe Gly Gln Ile Ala Asp Asn Asn Gln Asn
580 585 590

Ala Thr Thr Ala Pro His Ile Ala Asn Leu Asp Ala Met Gly Ile Val
595 600 605

Pro Gly Met Val Trp Gln Asn Arg Asp Ile Tyr Tyr Gln Gly Pro Ile
610 615 620

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

Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile Phe Ile Lys
645 650 655

Asn Thr Pro Val Pro Ala Asn Pro Asn Thr Thr Phe Ser Ala Ala Arg

660

665

670

Ile Asn Ser Phe Leu Thr Gln Tyr Ser Thr Gly Gln Val Ala Val Gln
 675 680 685

Ile Asp Trp Glu Ile Gln Lys Glu His Ser Lys Arg Trp Asn Pro Glu
 690 695 700

Val Gln Phe Thr Ser Asn Tyr Gly Thr Gln Asn Ser Met Leu Trp Ala
 705 710 715 720

Pro Gly Asn Ala Gly Asn Tyr His Glu Pro Arg Ala Ile Gly Ser Arg
 725 730 735

Phe Leu Thr His His Leu
 740

<210> 23
 <211> 739
 <212> PRT
 <213> Papio hamadryas

<400> 23

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
 1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
 20 25 30

Lys Ala Asn Gln Gln His Gln Asp Asn Ser Arg Gly Leu Val Leu Pro
 35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
 50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
 65 70 75 80

Lys Gln Leu Glu Gln Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
 85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
 100 105 110

Ile Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Ile Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

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

Gln Thr Pro Ala Lys Lys Arg Pro Gln Gly Glu Gln Ser Gly Asp Ser
165 170 175

Ala Arg Arg Gln Leu Asp Phe Asp Pro Gln Pro Ala Ala Pro Ile Gly
180 185 190

Gln Pro Pro Ala Ala Pro Ser Pro Val Gly Ser Asn Thr Met Ala Ser
195 200 205

Gly Gly Gly Gly Pro Met Ala Asp Asp Asn Gln Gly Ala Asp Gly Val
210 215 220

Gly Asn Ala Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp
225 230 235 240

Arg Val Ile Thr Thr Ser Thr Arg Thr Trp Val Leu Pro Thr Tyr Asn
245 250 255

Asn His Ile Tyr Lys Gln Ile Ser Ser Glu Ser Gly Ala Thr Asn Asp
260 265 270

Asn His Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn
275 280 285

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Ile Phe Asn
305 310 315 320

Ile Gln Val Lys Glu Val Thr Gln Ile Glu Gly Gly Ser Thr Ile Ala
325 330 335

Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Ala Asp Ser Glu Tyr Gln
340 345 350

Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe
355 360 365

Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn
370 375 380

Asn Gly Ser Gln Ser Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr
385 390 395 400

Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr
405 410 415

Thr Phe Glu Ser Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser
420 425 430

Leu Asp Arg Ile Met Asn Pro Leu Val Asp Gln Tyr Leu Tyr Tyr Leu
435 440 445

Ala Arg Thr Gln Thr Gly Thr Gly Ser Thr Thr Ser Asn Thr Arg Gln
450 455 460

Leu Gln Phe Tyr Gln Ala Gly Pro Ser Asn Met Ala Asp Gln Ser Arg
465 470 475 480

Asn Trp Leu Pro Gly Pro Met Tyr Arg Gln Gln Arg Val Ser Lys Thr
485 490 495

Leu Asp Gln Asn Ser Asn Thr Asn Phe Ala Trp Thr Ala Ala Ser Lys
500 505 510

Tyr Asn Leu Asn Gly Arg Lys Ser Leu Val Asn Pro Gly Ile Ala Met
515 520 525

Ala Thr His Lys Asp Asp Glu Glu Arg Phe Phe Pro Gln His Gly Val
530 535 540

Leu Val Phe Gly Lys Thr Asn Ala Thr Asn Lys Thr Thr Leu Glu Asn
545 550 555 560

Val Leu Val Thr Asp Glu Glu Glu Val Lys Ala Thr Asn Pro Val Ala
565 570 575

Thr Glu Glu Tyr Gly Thr Val Ser Ser Asn Leu Gln Ser Asn Thr Thr
580 585 590

Asn Pro Thr Thr Glu Thr Val Asn Asn Gln Gly Ile Leu Pro Gly Met
595 600 605

Val Trp Gln Asp Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys
610 615 620

Ile Pro His Thr Asp Gly His Phe His Pro Ser Pro Leu Met Gly Gly
625 630 635 640

Phe Gly Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro
645 650 655

Val Pro Ala Asn Pro Pro Glu Thr Phe Thr Thr Ser Lys Phe Ala Ser
660 665 670

Tyr Ile Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp
675 680 685

Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr
690 695 700

Thr Ser Asn Tyr Ala Lys Ser Asn Asn Val Glu Phe Ser Ala Asp Ala
705 710 715 720

Ala Gly Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr
725 730 735

Arg Asn Leu

<210> 24

<211> 739

<212> PRT

<213> Papio hamadryas

<400> 24

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln His Gln Asp Asn Ser Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Lys Gln Leu Glu Gln Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Ile Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Val Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

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

Gln Thr Pro Ala Lys Lys Arg Pro Gln Gly Glu Gln Ser Gly Asp Ser
165 170 175

Ala Arg Arg Gln Leu Asp Phe Asp Pro Gln Pro Ala Ala Pro Ile Gly
180 185 190

Gln Pro Pro Ala Ala Pro Ser Pro Val Gly Ser Asn Thr Met Ala Ser
195 200 205

Gly Gly Gly Gly Pro Met Ala Asp Asp Asn Gln Gly Ala Asp Gly Val
210 215 220

Gly Asn Ala Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp
225 230 235 240

Arg Val Ile Thr Thr Ser Thr Arg Thr Trp Val Leu Pro Thr Tyr Asn
245 250 255

Asn His Ile Tyr Lys Gln Ile Ser Ser Glu Ser Gly Ala Thr Asn Asp

260	265	270
Asn His Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn 275 280 285		
Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn 290 295 300		
Asn Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Ile Phe Asn 305 310 315 320		
Ile Gln Val Lys Glu Val Thr Gln Ile Glu Gly Gly Ser Thr Ile Ala 325 330 335		
Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Ala Asp Ser Glu Tyr Gln 340 345 350		
Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe 355 360 365		
Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn 370 375 380		
Asn Gly Ser Gln Ser Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr 385 390 395 400		
Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr 405 410 415		
Thr Phe Glu Ser Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser 420 425 430		
Leu Asp Arg Ile Met Asn Pro Leu Val Asp Gln Tyr Leu Tyr Tyr Leu 435 440 445		
Ala Arg Thr Gln Thr Gly Thr Gly Ser Thr Thr Ser Asn Thr Arg Gln 450 455 460		
Leu Gln Phe Tyr Gln Ala Gly Pro Ser Asn Met Ala Asp Gln Ser Arg 465 470 475 480		
Asn Trp Leu Pro Gly Pro Met Tyr Arg Gln Gln Arg Val Ser Lys Thr 485 490 495		

Leu Asp Gln Asn Ser Asn Thr Asn Phe Ala Trp Thr Ala Ala Ser Lys
500 505 510

Tyr Asn Leu Asn Gly Arg Lys Ser Leu Ala Asn Pro Gly Ile Ala Met
515 520 525

Ala Thr His Lys Asp Asp Glu Glu Arg Phe Phe Pro Gln His Arg Val
530 535 540

Leu Val Phe Gly Gln Thr Asn Ala Thr Asn Lys Thr Thr Leu Asp Asn
545 550 555 560

Val Leu Ile Thr Ser Glu Glu Glu Ile Lys Ala Thr Asn Pro Val Ala
565 570 575

Thr Glu Glu Tyr Gly Thr Val Ser Ser Asn Leu Gln Ala Ser Asn Thr
580 585 590

Asp Pro Thr Thr Glu Thr Val Asn Asn Gln Gly Ile Leu Pro Gly Met
595 600 605

Val Trp Gln Asp Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Val Lys
610 615 620

Ile Pro His Thr Asp Gly His Phe His Pro Ser Pro Leu Met Gly Gly
625 630 635 640

Phe Gly Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro
645 650 655

Val Pro Ala Asn Pro Pro Glu Thr Phe Thr Thr Ser Lys Phe Ala Ser
660 665 670

Tyr Thr Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp
675 680 685

Gly Leu Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr
690 695 700

Thr Ser Asn Tyr Ala Lys Ser Asn Asn Val Glu Phe Ser Val Asp Ala
705 710 715 720

Ala Gly Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr

725

730

735

Arg Asn Leu

<210> 25

<211> 739

<212> PRT

<213> Papio hamadryas

<400> 25

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
 1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
 20 25 30

Lys Ala Asn Gln Gln His Gln Asp Asn Ser Arg Gly Leu Val Leu Pro
 35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
 50 55 60

Val Asn Glu Ala Tyr Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
 65 70 75 80

Lys Gln Leu Glu Gln Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
 85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
 100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Ile Pro Glu Pro
 115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Lys Arg
 130 135 140

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

Gln Thr Pro Ala Lys Lys Arg Pro Gln Gly Glu Gln Ser Gly Asp Ser
 165 170 175

Ala Arg Arg Gln Leu Asp Phe Asp Pro Gln Pro Ala Ala Pro Ile Gly
180 185 190

Gln Pro Pro Ala Ala Pro Ser Pro Val Gly Ser Asn Thr Met Ala Ser
195 200 205

Gly Gly Gly Gly Pro Met Ala Asp Asp Asn Gln Gly Ala Asp Gly Val
210 215 220

Gly Asn Ala Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp
225 230 235 240

Arg Val Ile Thr Thr Ser Thr Arg Thr Trp Val Leu Pro Thr Tyr Asn
245 250 255

Asn His Ile Tyr Lys Gln Ile Ser Ser Glu Ser Gly Ala Thr Asn Asp
260 265 270

Asn His Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn
275 280 285

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Ile Phe Asn
305 310 315 320

Ile Gln Val Lys Glu Val Thr Gln Ile Glu Gly Gly Ser Thr Ile Ala
325 330 335

Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Ala Asp Ser Glu Tyr Gln
340 345 350

Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe
355 360 365

Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn
370 375 380

Asn Gly Ser Gln Ser Val Gly Arg Pro Ser Phe Tyr Cys Leu Glu Tyr
385 390 395 400

Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr
405 410 415

Thr Phe Glu Ser Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser
420 425 430

Leu Asp Arg Ile Met Asn Pro Leu Val Asp Gln Tyr Leu Tyr Tyr Leu
435 440 445

Ala Arg Thr Gln Thr Gly Thr Gly Ser Thr Thr Ser Asn Thr Arg Gln
450 455 460

Leu Gln Phe Tyr Gln Ala Gly Pro Ser Asn Met Ala Asp Gln Ser Arg
465 470 475 480

Asn Trp Leu Pro Gly Pro Met Tyr Arg Gln Gln Arg Val Ser Lys Thr
485 490 495

Leu Asp Gln Asn Ser Asn Thr Asn Phe Ala Trp Thr Ala Ala Ser Lys
500 505 510

Tyr Asn Leu Asn Gly Arg Lys Ser Leu Ala Asn Pro Gly Ile Ala Met
515 520 525

Ala Thr His Lys Asp Asp Glu Glu Arg Phe Phe Pro Gln His Gly Val
530 535 540

Leu Val Phe Gly Gln Thr Asn Ala Thr Asn Lys Thr Thr Leu Asp Asn
545 550 555 560

Val Leu Ile Thr Ser Glu Glu Glu Ile Lys Ala Thr Asn Pro Val Ala
565 570 575

Thr Glu Glu Tyr Gly Thr Val Ser Ser Asn Leu Gln Ala Ser Asn Thr
580 585 590

Asn Pro Thr Thr Glu Thr Val Asn Asn Gln Gly Ile Leu Pro Gly Met
595 600 605

Val Trp Gln Asp Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys
610 615 620

Ile Pro His Thr Asp Gly His Phe His Pro Ser Pro Leu Met Gly Gly
625 630 635 640

Phe Gly Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro
645 650 655

Val Pro Ala Asn Pro Pro Glu Thr Phe Thr Thr Ser Lys Phe Ala Ser
660 665 670

Tyr Ile Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp
675 680 685

Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr
690 695 700

Thr Ser Asn Tyr Ala Lys Ser Asn Asn Val Glu Phe Ser Val Asp Ala
705 710 715 720

Ala Gly Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr
725 730 735

Arg Asn Leu

<210> 26
<211> 739
<212> PRT
<213> Papio hamadryas

<400> 26

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln His Gln Asp Asn Ser Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Lys Gln Leu Glu Gln Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Ile Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Glu Thr Ala Pro Gly Lys Lys Arg
130 135 140

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

Gln Thr Pro Ala Lys Lys Arg Pro Gln Gly Glu Gln Ser Gly Asp Ser
165 170 175

Ala Arg Arg Gln Leu Asp Phe Asp Pro Gln Pro Ala Ala Pro Ile Gly
180 185 190

Gln Pro Pro Ala Ala Pro Ser Pro Val Gly Ser Asn Thr Met Ala Ser
195 200 205

Gly Gly Gly Gly Pro Met Ala Asp Asp Asn Gln Gly Ala Asp Gly Val
210 215 220

Gly Asn Ala Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp
225 230 235 240

Arg Val Ile Thr Thr Ser Thr Arg Thr Trp Val Leu Pro Thr Tyr Asn
245 250 255

Asn His Ile Tyr Lys Gln Ile Ser Ser Glu Ser Gly Ala Thr Asn Asp
260 265 270

Asn His Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn
275 280 285

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Ile Phe Asn
305 310 315 320

Ile Gln Val Lys Glu Val Thr Gln Thr Glu Gly Gly Ser Thr Ile Ala

325

330

335

Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Ala Asp Ser Glu Tyr Gln
 340 345 350

Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe
 355 360 365

Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn
 370 375 380

Asn Gly Ser Gln Ser Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr
 385 390 395 400

Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr
 405 410 415

Thr Phe Glu Ser Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser
 420 425 430

Leu Asp Arg Ile Ile Asn Pro Leu Val Asp Gln Tyr Leu Tyr Tyr Leu
 435 440 445

Ala Arg Thr Gln Thr Gly Thr Gly Ser Thr Thr Ser Asn Thr Arg Gln
 450 455 460

Leu Gln Phe Tyr Gln Ala Gly Pro Ser Asn Met Ala Asp Gln Ser Arg
 465 470 475 480

Asn Trp Leu Pro Gly Pro Met Tyr Arg Gln Gln Arg Val Ser Lys Thr
 485 490 495

Leu Asp Gln Asn Ser Asn Thr Asn Phe Ala Trp Thr Ala Ala Ser Lys
 500 505 510

Tyr Asn Leu Asn Gly Arg Lys Ser Leu Ala Asn Pro Gly Ile Ala Met
 515 520 525

Ala Thr His Lys Asp Asp Glu Glu Arg Phe Phe Pro Gln His Gly Val
 530 535 540

Leu Val Phe Gly Gln Thr Asn Ala Thr Asn Lys Thr Thr Leu Asp Asn
 545 550 555 560

Val Leu Ile Thr Ser Glu Glu Glu Ile Lys Ala Thr Asn Pro Val Ala
565 570 575

Thr Glu Glu Tyr Gly Thr Val Ser Ser Asn Leu Gln Ala Ser Asn Thr
580 585 590

Asn Pro Thr Thr Glu Thr Val Asn Asn Gln Gly Ile Leu Pro Gly Met
595 600 605

Val Trp Gln Asp Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys
610 615 620

Ile Pro His Thr Asp Gly His Phe His Pro Ser Pro Leu Met Gly Gly
625 630 635 640

Phe Gly Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro
645 650 655

Val Pro Ala Asn Pro Pro Glu Thr Phe Thr Thr Ser Lys Phe Ala Ser
660 665 670

Tyr Ile Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp
675 680 685

Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr
690 695 700

Thr Ser Asn Tyr Ala Lys Ser Asn Asn Val Glu Phe Ser Val Asp Ala
705 710 715 720

Ala Gly Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr
725 730 735

Arg Asn Leu

<210> 27
<211> 739
<212> PRT
<213> Papio hamadryas

<400> 27

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Gly Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln His Gln Asp Asn Ser Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Lys Gln Leu Glu Gln Gly Asp Asn Pro Cys Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Ile Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

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

Gln Thr Pro Ala Lys Lys Arg Pro Gln Gly Glu Gln Ser Gly Asp Ser
165 170 175

Ala Arg Arg Gln Leu Asp Phe Asp Pro Gln Pro Ala Ala Pro Ile Gly
180 185 190

Gln Pro Pro Ala Ala Pro Ser Pro Val Gly Ser Asn Thr Met Ala Ser
195 200 205

Gly Gly Gly Gly Pro Met Ala Asp Asp Asn Gln Gly Ala Asp Gly Val
210 215 220

Gly Asn Ala Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp
225 230 235 240

Arg Val Ile Thr Thr Ser Thr Arg Thr Trp Val Leu Pro Thr Tyr Asn
245 250 255

Asn His Ile Tyr Lys Gln Ile Ser Ser Glu Ser Gly Ala Thr Asn Asp
260 265 270

Asn His Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn
275 280 285

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Ile Phe Asn
305 310 315 320

Ile Gln Val Lys Glu Val Thr Gln Ile Glu Gly Gly Ser Thr Ile Ala
325 330 335

Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Ala Asp Ser Glu Tyr Gln
340 345 350

Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe
355 360 365

Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn
370 375 380

Asn Gly Ser Gln Ser Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr
385 390 395 400

Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr
405 410 415

Thr Phe Glu Ser Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser
420 425 430

Leu Asp Arg Ile Met Asn Pro Leu Val Asp Gln Tyr Leu Tyr Tyr Leu
435 440 445

Ala Arg Thr Gln Thr Gly Thr Gly Ser Thr Thr Ser Asn Thr Arg Gln
450 455 460

Leu Gln Phe Tyr Gln Ala Gly Pro Ser Asn Met Ala Asp Gln Ser Arg
465 470 475 480

Asn Trp Leu Pro Gly Pro Met Tyr Arg Gln Gln Arg Val Ser Lys Thr
485 490 495

Leu Asp Gln Asn Ser Asn Thr Asn Phe Ala Trp Thr Ala Ala Ser Lys
500 505 510

Tyr Asn Leu Asn Gly Arg Lys Ser Leu Ala Asn Pro Gly Ile Ala Met
515 520 525

Ala Thr His Lys Asp Asp Glu Glu Arg Phe Phe Pro Gln His Gly Val
530 535 540

Leu Val Phe Gly Gln Thr Asn Ala Thr Asn Lys Thr Thr Leu Asp Asn
545 550 555 560

Val Leu Ile Thr Ser Glu Glu Glu Ile Lys Ala Thr Asn Pro Val Ala
565 570 575

Thr Glu Glu Tyr Gly Thr Val Ser Ser Asn Leu Gln Ala Ser Asn Thr
580 585 590

Asn Pro Thr Thr Glu Thr Val Asn Asn Gln Gly Ile Leu Pro Gly Met
595 600 605

Val Trp Gln Asp Arg Asp Val Tyr Leu Gln Gly Pro Thr Trp Ala Lys
610 615 620

Ile Pro His Thr Asp Gly His Phe His Pro Ser Pro Leu Met Gly Gly
625 630 635 640

Phe Gly Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro
645 650 655

Val Pro Ala Asn Pro Pro Glu Thr Phe Thr Thr Ser Lys Phe Ala Ser
660 665 670

Tyr Ile Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp
675 680 685

Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr
690 695 700

Thr Ser Asn Tyr Ala Lys Ser Asn Asn Val Glu Phe Ser Val Asp Ala
705 710 715 720

Ala Gly Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr
725 730 735

Arg Asn Leu

<210> 28
<211> 739
<212> PRT
<213> Papio hamadryas

<400> 28

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln His Gln Asp Asn Ser Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Lys Gln Leu Glu Gln Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Ile Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

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

Gln Thr Pro Ala Lys Lys Arg Pro Gln Gly Glu Gln Ser Gly Asp Ser
165 170 175

Ala Arg Arg Gln Leu Asp Phe Asp Pro Gln Pro Ala Ala Pro Ile Gly
180 185 190

Gln Pro Pro Ala Ala Pro Ser Pro Val Gly Ser Asn Thr Met Ala Ser
195 200 205

Gly Gly Gly Gly Pro Met Ala Asp Asp Asn Gln Gly Ala Asp Gly Val
210 215 220

Gly Asn Ala Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp
225 230 235 240

Arg Val Ile Thr Thr Ser Thr Arg Thr Trp Val Leu Pro Thr Tyr Asn
245 250 255

Asn His Ile Tyr Lys Gln Ile Ser Ser Glu Ser Gly Ala Thr Asn Asp
260 265 270

Asn His Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn
275 280 285

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Ile Phe Asn
305 310 315 320

Ile Gln Val Lys Glu Val Thr Gln Ile Glu Gly Gly Ser Thr Ile Ala
325 330 335

Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Ala Asp Ser Glu Tyr Gln
340 345 350

Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe
355 360 365

Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn
370 375 380

Asn Gly Ser Gln Ser Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr

385					390						395				400
Phe	Pro	Ser	Gln	Met	Leu	Arg	Thr	Gly	Asn	Ser	Phe	Gln	Phe	Ser	Tyr
				405					410					415	
Thr	Phe	Glu	Ser	Val	Pro	Phe	His	Ser	Ser	Tyr	Ala	His	Ser	Gln	Ser
			420					425					430		
Leu	Asp	Arg	Ile	Met	Asn	Pro	Leu	Val	Asp	Gln	Tyr	Leu	Tyr	Tyr	Leu
		435					440					445			
Ala	Arg	Thr	Gln	Thr	Gly	Thr	Gly	Ser	Thr	Thr	Ser	Asn	Thr	Arg	Gln
	450					455					460				
Leu	Gln	Phe	Tyr	Gln	Ala	Gly	Pro	Ser	Asn	Met	Ala	Asp	Gln	Ser	Arg
465					470					475					480
Asn	Trp	Leu	Pro	Gly	Pro	Met	Tyr	Arg	Gln	Gln	Arg	Val	Ser	Lys	Thr
				485					490					495	
Leu	Asp	Gln	Asn	Ser	Asn	Thr	Asn	Phe	Ala	Trp	Thr	Ala	Ala	Ser	Lys
			500					505					510		
Tyr	Asn	Leu	Asn	Gly	Arg	Lys	Ser	Leu	Ala	Asn	Pro	Gly	Ile	Ala	Met
		515					520					525			
Ala	Thr	His	Lys	Asp	Asp	Glu	Glu	Arg	Phe	Phe	Pro	Gln	His	Gly	Val
	530					535					540				
Leu	Val	Phe	Gly	Gln	Thr	Asn	Ala	Thr	Asn	Lys	Thr	Thr	Leu	Asp	Asn
545					550					555					560
Val	Leu	Ile	Thr	Ser	Glu	Glu	Glu	Ile	Lys	Ala	Thr	Asn	Pro	Val	Ala
				565					570					575	
Thr	Glu	Glu	Tyr	Gly	Thr	Val	Ser	Ser	Asn	Leu	Gln	Ala	Ser	Asn	Thr
			580					585					590		
Asn	Pro	Thr	Thr	Glu	Thr	Val	Asn	Asn	Gln	Gly	Ile	Leu	Pro	Gly	Met
		595					600					605			
Val	Trp	Gln	Asp	Arg	Asp	Val	Tyr	Leu	Gln	Gly	Pro	Ile	Trp	Ala	Lys
610						615					620				

Ile Pro His Thr Asp Gly His Phe His Pro Ser Pro Leu Met Gly Gly
625 630 635 640

Phe Gly Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro
645 650 655

Val Pro Ala Asn Pro Pro Glu Thr Phe Thr Thr Ser Lys Phe Ala Ser
660 665 670

Tyr Ile Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp
675 680 685

Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr
690 695 700

Thr Ser Asn Tyr Ala Lys Ser Asn Asn Val Glu Phe Ser Val Asp Ala
705 710 715 720

Ala Gly Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr
725 730 735

Arg Asn Leu

<210> 29
<211> 739
<212> PRT
<213> Papio hamadryas

<400> 29

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln His Gln Asp Asn Ser Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Gly Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Lys Gln Leu Glu Gln Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Ile Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

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

Gln Thr Pro Ala Lys Lys Arg Pro Gln Gly Glu Gln Ser Gly Asp Ser
165 170 175

Ala Arg Arg Gln Leu Asp Phe Asp Pro Gln Pro Ala Ala Pro Ile Gly
180 185 190

Gln Pro Pro Ala Ala Pro Ser Pro Val Gly Ser Asn Thr Met Ala Ser
195 200 205

Gly Gly Gly Gly Pro Met Ala Asp Asp Asn Gln Gly Ala Asp Gly Val
210 215 220

Gly Asn Ala Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp
225 230 235 240

Arg Val Ile Thr Thr Ser Thr Arg Thr Trp Val Leu Pro Thr Tyr Asn
245 250 255

Asn His Ile Tyr Lys Gln Ile Ser Ser Glu Ser Gly Ala Thr Asn Asp
260 265 270

Asn His Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn
275 280 285

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Ile Phe Asn
305 310 315 320

Ile Gln Val Lys Glu Val Thr Gln Ile Glu Gly Gly Ser Thr Ile Ala
325 330 335

Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Ala Asp Ser Glu Tyr Gln
340 345 350

Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe
355 360 365

Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn
370 375 380

Asn Gly Ser Gln Ser Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr
385 390 395 400

Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr
405 410 415

Thr Phe Glu Ser Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser
420 425 430

Leu Asp Arg Ile Met Asn Pro Leu Val Asp Gln Tyr Leu Tyr Tyr Leu
435 440 445

Ala Arg Thr Gln Thr Gly Thr Gly Ser Thr Thr Ser Asn Thr Arg Gln
450 455 460

Leu Gln Phe Tyr Gln Ala Gly Pro Ser Asn Met Ala Asp Gln Ser Arg
465 470 475 480

Asn Trp Leu Pro Gly Pro Met Tyr Arg Gln Gln Arg Val Ser Lys Thr
485 490 495

Leu Asp Gln Asn Ser Asn Thr Asn Phe Ala Trp Thr Ala Ala Ser Lys
500 505 510

Tyr Asn Leu Asn Gly Arg Lys Ser Leu Val Asn Pro Gly Ile Ala Met
515 520 525

Ala Thr His Lys Asp Asp Glu Glu Arg Phe Phe Pro Gln His Gly Val
530 535 540

Leu Val Phe Gly Lys Thr Asn Ala Thr Asn Lys Thr Thr Leu Glu Asn
545 550 555 560

Val Leu Val Thr Asp Glu Glu Glu Val Lys Ala Thr Asn Pro Val Ala
565 570 575

Thr Glu Glu Tyr Gly Thr Val Ser Ser Asn Leu Gln Ser Asn Thr Thr
580 585 590

Asn Pro Thr Thr Glu Thr Val Asn Asn Gln Gly Ile Leu Pro Gly Met
595 600 605

Val Trp Gln Asp Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys
610 615 620

Ile Pro His Thr Asp Gly His Phe His Pro Ser Pro Leu Met Gly Gly
625 630 635 640

Phe Gly Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro
645 650 655

Val Pro Ala Asn Pro Pro Glu Thr Phe Thr Thr Ser Lys Phe Ala Ser
660 665 670

Tyr Ile Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp
675 680 685

Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr
690 695 700

Thr Ser Asn Tyr Ala Lys Ser Asn Asn Val Glu Phe Ser Val Asp Ala
705 710 715 720

Ala Gly Val Tyr Ser Glu Pro Arg Leu Ile Gly Thr Arg Tyr Leu Thr
725 730 735

Arg Asn Leu

<210> 30

<211> 739

<212> PRT

<213> Papio hamadryas

<400> 30

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln His Gln Asp Asn Ser Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Lys Gln Leu Glu Gln Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Ile Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

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

Gln Thr Pro Ala Lys Lys Arg Pro Gln Gly Glu Gln Ser Gly Asp Ser
165 170 175

Ala Arg Arg Gln Leu Asp Phe Asp Pro Gln Pro Ala Ala Pro Ile Gly
180 185 190

Gln Pro Pro Ala Ala Pro Ser Pro Val Gly Ser Asn Thr Met Ala Ser
195 200 205

Gly Gly Gly Gly Pro Met Ala Asp Asp Asn Gln Gly Ala Asp Gly Val
210 215 220

Gly Asn Ala Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp
225 230 235 240

Arg Val Ile Thr Thr Ser Thr Arg Thr Trp Val Leu Pro Thr Tyr Asn
245 250 255

Asn His Ile Tyr Lys Gln Ile Ser Ser Glu Ser Gly Ala Thr Asn Asp
260 265 270

Asn His Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn
275 280 285

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Ile Phe Asn
305 310 315 320

Ile Gln Val Lys Glu Val Thr Gln Ile Glu Gly Gly Ser Thr Ile Ala
325 330 335

Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Ala Asp Ser Glu Tyr Gln
340 345 350

Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe
355 360 365

Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn
370 375 380

Asn Gly Ser Gln Ser Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr
385 390 395 400

Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr
405 410 415

Thr Phe Glu Ser Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser
420 425 430

Leu Asp Arg Ile Met Asn Pro Leu Val Asp Gln Tyr Leu Tyr Tyr Leu
435 440 445

Ala Arg Thr Gln Thr Gly Thr Gly Ser Thr Thr Ser Asn Thr Arg Gln

450		455		460											
Leu 465	Gln	Phe	Tyr	Gln	Ala 470	Gly	Pro	Ser	Asn	Met 475	Ala	Asp	Gln	Ser	Arg 480
Asn	Trp	Leu	Pro	Gly 485	Pro	Met	Tyr	Arg	Gln 490	Gln	Arg	Val	Ser	Lys 495	Thr
Leu	Asp	Gln	Asn 500	Ser	Asn	Thr	Asn	Phe	Ala 505	Trp	Thr	Ala	Ala 510	Ser	Lys
Tyr	Asn 515	Leu	Asn	Gly	Arg	Lys	Ser 520	Leu	Val	Asn	Pro	Gly 525	Ile	Ala	Met
Ala 530	Thr	His	Lys	Asp	Asp	Glu 535	Glu	Arg	Phe	Phe	Pro 540	Gln	His	Gly	Val
Leu 545	Val	Phe	Gly	Lys	Thr 550	Asn	Ala	Thr	Asn	Lys 555	Thr	Thr	Leu	Glu	Asn 560
Val	Leu	Val	Thr	Asp 565	Glu	Glu	Glu	Val	Lys 570	Ala	Thr	Asn	Pro	Val 575	Ala
Thr	Glu	Glu	Tyr 580	Gly	Thr	Val	Ser	Ser 585	Asn	Leu	Gln	Ser	Asn 590	Thr	Thr
Asn	Pro	Thr 595	Thr	Glu	Thr	Val	Asn 600	Asn	Gln	Gly	Ile	Leu 605	Pro	Gly	Met
Val 610	Trp	Gln	Asp	Arg	Asp	Val 615	Tyr	Leu	Gln	Gly	Pro 620	Ile	Trp	Ala	Lys
Ile 625	Pro	His	Thr	Asp	Gly 630	His	Phe	His	Pro	Ser 635	Pro	Leu	Met	Gly	Gly 640
Phe	Gly	Leu	Lys 645	His	Pro	Pro	Pro	Gln	Ile 650	Leu	Ile	Lys	Asn	Thr 655	Pro
Val	Pro	Ala	Asn 660	Pro	Pro	Glu	Thr	Phe 665	Thr	Thr	Ser	Lys	Phe 670	Ala	Ser
Tyr	Ile	Thr 675	Gln	Tyr	Ser	Thr	Gly 680	Gln	Val	Ser	Val	Glu 685	Ile	Glu	Trp

Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr
690 695 700

Thr Ser Asn Tyr Ala Lys Ser Asn Asn Val Glu Phe Ser Val Asp Ala
705 710 715 720

Ala Gly Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr
725 730 735

Arg Asn Leu

<210> 31
<211> 739
<212> PRT
<213> Papio hamadryas

<400> 31

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln His Gln Asp Asn Ser Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Lys Gln Leu Glu Gln Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Ile Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

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

Gln Thr Pro Ala Lys Lys Arg Pro Gln Gly Glu Gln Ser Gly Asp Ser
165 170 175

Ala Arg Arg Gln Leu Asp Phe Asp Pro Gln Pro Ala Ala Pro Ile Gly
180 185 190

Gln Pro Pro Ala Ala Pro Ser Pro Val Gly Ser Asn Thr Met Ala Ser
195 200 205

Gly Gly Gly Gly Pro Met Ala Asp Asp Asn Gln Gly Ala Asp Gly Val
210 215 220

Gly Asn Ala Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp
225 230 235 240

Arg Val Ile Thr Thr Ser Thr Arg Thr Trp Val Leu Pro Thr Tyr Asn
245 250 255

Asn His Ile Tyr Lys Gln Ile Ser Ser Glu Ser Gly Ala Thr Asn Asp
260 265 270

Asn His Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn
275 280 285

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Ile Phe Asn
305 310 315 320

Ile Gln Val Lys Glu Val Thr Gln Ile Glu Gly Gly Ser Thr Ile Ala
325 330 335

Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Ala Asp Ser Glu Tyr Gln
340 345 350

Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe
355 360 365

Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn
370 375 380

Asn Gly Ser Gln Ser Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr
385 390 395 400

Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr
405 410 415

Thr Phe Glu Ser Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser
420 425 430

Leu Asp Arg Ile Met Asn Pro Leu Val Asp Gln Tyr Leu Tyr Tyr Leu
435 440 445

Ala Arg Thr Gln Thr Gly Thr Gly Ser Thr Thr Ser Asn Thr Arg Gln
450 455 460

Leu Gln Phe Tyr Gln Ala Gly Pro Ser Asn Met Ala Asp Gln Ser Arg
465 470 475 480

Asn Trp Leu Pro Gly Pro Met Tyr Arg Gln Gln Arg Val Ser Lys Thr
485 490 495

Leu Asp Gln Asp Ser Asn Thr Asn Phe Ala Trp Thr Ala Ala Ser Lys
500 505 510

Tyr Asn Leu Asn Gly Arg Lys Ser Leu Val Asn Pro Gly Ile Ala Met
515 520 525

Ala Thr His Lys Asp Asp Glu Glu Arg Phe Phe Pro Gln His Gly Val
530 535 540

Leu Val Phe Gly Lys Thr Asn Ala Thr Asn Lys Thr Thr Leu Glu Asn
545 550 555 560

Val Leu Val Thr Asp Glu Glu Glu Val Lys Ala Thr Asn Pro Val Ala
565 570 575

Thr Glu Glu Tyr Gly Thr Val Ser Ser Asn Leu Gln Ser Asn Thr Thr
580 585 590

Asn Pro Thr Thr Glu Thr Val Asn Asn Gln Gly Ile Leu Pro Gly Met
595 600 605

Ala Trp Gln Asp Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys
610 615 620

Ile Pro His Thr Asp Gly His Phe His Pro Ser Pro Leu Met Gly Gly
625 630 635 640

Phe Gly Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro
645 650 655

Val Pro Ala Asn Pro Pro Glu Thr Phe Thr Thr Ser Lys Phe Ala Ser
660 665 670

Tyr Ile Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp
675 680 685

Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr
690 695 700

Thr Ser Asn Tyr Ala Lys Ser Asn Asn Val Glu Phe Ser Val Asp Ala
705 710 715 720

Ala Gly Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr
725 730 735

Arg Asn Leu

<210> 32
<211> 736
<212> PRT
<213> Macaca fascicularis

<400> 32

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro

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

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Asp Asn Asn Gly Val Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Asp Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Glu Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asp
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Glu
405 410 415

Phe Glu Asn Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser
435 440 445

Lys Thr Ile Asn Gly Ser Gly Gln Asn Gln Gln Ala Leu Lys Phe Ser
450 455 460

Val Ala Gly Pro Ser Asn Met Ala Val Gln Gly Arg Asn Tyr Ile Pro
465 470 475 480

Gly Pro Ser Tyr Arg Gln Gln Arg Val Ser Thr Thr Val Thr Gln Asn
485 490 495

Asn Asn Ser Glu Phe Ala Trp Pro Gly Ala Ser Ser Trp Ala Leu Asn
500 505 510

Gly Arg Asn Ser Leu Met Asn Pro Gly Pro Ala Met Ala Ser His Lys

515		520		525
Glu Gly Glu Asp Arg Phe Phe Pro Leu Ser Gly Ser Leu Ile Phe Gly				
530		535		540
Lys Gln Gly Thr Gly Arg Asp Asn Val Asp Ala Asp Lys Val Met Ile				
545		550		555
Thr Asn Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu Ser				
		565		570
				575
Tyr Gly Gln Val Ala Thr Asn His Gln Ser Ala Gln Ala Gln Ala Gln				
		580		585
				590
Thr Gly Trp Val Gln Asn Gln Gly Ile Leu Pro Gly Met Val Trp Gln				
		595		600
				605
Asp Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His				
		610		615
				620
Thr Asp Gly Asn Phe His Pro Ser Pro Leu Val Gly Gly Phe Gly Met				
		625		630
				635
Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala				
		645		650
				655
Asp Pro Pro Thr Ala Phe Asn Lys Asp Lys Leu Asn Ser Phe Ile Thr				
		660		665
				670
Gln Tyr Ser Thr Gly Gln Val Arg Val Glu Ile Glu Trp Glu Leu Gln				
		675		680
				685
Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn				
		690		695
				700
Tyr Tyr Lys Ser Asn Asn Val Glu Phe Ala Val Asn Thr Glu Gly Val				
		705		710
				715
				720
Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu				
		725		730
				735

<210> 33
 <211> 736
 <212> PRT

<213> Macaca fascicularis

<400> 33

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ala Gly Ile Gly
145 150 155 160

Lys Ser Gly Ala Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Thr Glu Ser Val Pro Asp Pro Gln Pro Ile Gly Glu Pro Pro
180 185 190

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

Ala Pro Val Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Gln Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Ser Thr Ser Gly Gly Ser Ser Asn Asp Asn
260 265 270

Ala Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Asp Asn Asn Gly Val Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Asp Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Glu Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asp
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Pro Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Glu
405 410 415

Phe Glu Asn Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser
435 440 445

Lys Thr Ile Asn Gly Ser Gly Gln Asn Gln Gln Thr Leu Lys Phe Ser
450 455 460

Val Ala Gly Pro Ser Asn Met Ala Val Gln Gly Arg Asn Tyr Ile Pro
465 470 475 480

Gly Pro Ser Tyr Arg Gln Gln Arg Val Ser Thr Thr Val Thr Gln Asn
485 490 495

Asn Asn Ser Glu Phe Ala Trp Pro Gly Ala Ser Ser Trp Ala Leu Asn
500 505 510

Gly Arg Asn Ser Leu Met Asn Pro Gly Pro Ala Met Ala Ser His Lys
515 520 525

Glu Gly Glu Asp Arg Phe Phe Pro Leu Ser Gly Ser Leu Ile Phe Gly
530 535 540

Lys Gln Gly Thr Gly Arg Asp Asn Val Asp Ala Asp Lys Val Met Ile
545 550 555 560

Thr Asn Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu Ser
565 570 575

Tyr Gly Gln Val Ala Thr Asn His Gln Ser Ala Gln Ala Gln Ala Gln
580 585 590

Thr Gly Trp Val Gln Asn Gln Gly Ile Leu Pro Gly Met Val Trp Gln
595 600 605

Asp Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His
610 615 620

Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Met
625 630 635 640

Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
645 650 655

Asp Pro Pro Thr Ala Phe Asn Lys Asp Lys Leu Asn Ser Phe Ile Thr
660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Ala Ile Glu Trp Glu Leu Gln
675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn
690 695 700

Tyr Tyr Lys Ser Asn Asn Val Glu Phe Ala Val Asn Thr Glu Gly Val
705 710 715 720

Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
725 730 735

<210> 34
<211> 736
<212> PRT
<213> Macaca fascicularis

<400> 34

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

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

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

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Glu
405 410 415

Phe Glu Asn Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Pro Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser
435 440 445

Lys Thr Ile Asn Gly Ser Gly Gln Asn Gln Gln Thr Leu Lys Phe Ser
450 455 460

Val Ala Gly Pro Ser Asn Met Ala Val Gln Gly Arg Asn Tyr Ile Pro
465 470 475 480

Gly Pro Ser Tyr Arg Gln Gln Arg Val Ser Thr Thr Val Thr Gln Asn
485 490 495

Asn Asn Ser Glu Phe Ala Trp Pro Gly Ala Ser Ser Trp Ala Leu Asn
500 505 510

Gly Arg Asn Ser Leu Met Asn Pro Gly Pro Ala Met Ala Ser His Lys
515 520 525

Glu Gly Glu Asp Arg Phe Phe Pro Leu Ser Gly Ser Leu Ile Phe Gly
530 535 540

Lys Gln Gly Thr Gly Arg Asp Asn Val Asp Ala Asp Lys Val Met Ile
545 550 555 560

Thr Asn Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu Ser
565 570 575

Tyr Gly Gln Val Ala Thr Asn His Gln Ser Ala Gln Ala Gln Ala Gln
580 585 590

Thr Gly Trp Val Gln Asn Gln Gly Ile Leu Pro Gly Met Val Trp Gln
595 600 605

Asp Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His

610					615					620					
Thr	Asp	Gly	Asn	Phe	His	Pro	Ser	Pro	Leu	Met	Gly	Gly	Phe	Gly	Met
625					630					635					640
Lys	His	Pro	Pro	Pro	Gln	Ile	Leu	Ile	Lys	Asn	Thr	Pro	Val	Pro	Ala
				645					650					655	
Asp	Pro	Pro	Thr	Ala	Phe	Asn	Lys	Asp	Lys	Leu	Asn	Ser	Phe	Ile	Thr
			660					665					670		
Gln	Tyr	Ser	Thr	Gly	Gln	Val	Ser	Val	Glu	Ile	Glu	Trp	Glu	Leu	Gln
		675					680					685			
Lys	Glu	Asn	Ser	Lys	Arg	Trp	Asn	Pro	Glu	Ile	Gln	Tyr	Thr	Ser	Asn
	690					695					700				
Tyr	Tyr	Lys	Ser	Asn	Asn	Val	Glu	Phe	Ala	Val	Asn	Thr	Glu	Gly	Val
705					710					715					720
Tyr	Ser	Glu	Pro	Arg	Pro	Ile	Gly	Thr	Arg	Tyr	Leu	Thr	Arg	Asn	Leu
				725					730					735	
<210> 35															
<211> 736															
<212> PRT															
<213> Macaca fascicularis															
<400> 35															
Met	Ala	Ala	Asp	Gly	Tyr	Leu	Pro	Asp	Trp	Leu	Glu	Asp	Asn	Leu	Ser
1				5					10					15	
Glu	Gly	Ile	Arg	Glu	Trp	Trp	Ala	Leu	Lys	Pro	Gly	Ala	Pro	Gln	Pro
			20					25					30		
Lys	Ala	Asn	Gln	Gln	Lys	Gln	Asp	Asp	Gly	Arg	Gly	Leu	Val	Leu	Pro
		35					40					45			
Gly	Tyr	Lys	Tyr	Leu	Gly	Pro	Phe	Asn	Gly	Leu	Asp	Lys	Gly	Glu	Pro
	50					55					60				
Val	Asn	Glu	Ala	Asp	Ala	Ala	Ala	Leu	Glu	His	Asp	Lys	Ala	Tyr	Asp
65					70					75					80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ala Gly Ile Gly
145 150 155 160

Lys Ser Gly Ala Gln Pro Ala Ile Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Thr Glu Ser Val Pro Asp Pro Gln Pro Ile Gly Glu Pro Pro
180 185 190

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

Ala Pro Val Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Gln Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Ile Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Ser Thr Ser Gly Gly Ser Ser Asn Asp Asn
260 265 270

Ala Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Ser Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Asp Asn Asn Gly Val Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Asp Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Glu Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asp
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Glu
405 410 415

Phe Glu Asn Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser
435 440 445

Lys Thr Ile Asn Gly Ser Gly Gln Asn Gln Gln Thr Leu Lys Phe Ser
450 455 460

Val Ala Gly Pro Ser Asn Met Ala Val Gln Gly Arg Asn Tyr Ile Pro
465 470 475 480

Gly Pro Ser Tyr Arg Gln Gln Arg Val Ser Thr Thr Val Thr Gln Asn
485 490 495

Asn Asn Ser Glu Phe Ala Trp Pro Gly Ala Ser Ser Trp Ala Leu Asn
500 505 510

Gly Arg Asn Ser Leu Met Asn Pro Gly Pro Ala Met Ala Ser His Lys
515 520 525

Glu Gly Glu Asp Arg Phe Phe Pro Leu Ser Gly Ser Leu Ile Phe Gly
530 535 540

Lys Gln Gly Thr Gly Arg Asp Asn Val Asp Ala Asp Lys Val Met Ile
545 550 555 560

Thr Asn Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu Ser
565 570 575

Tyr Gly Gln Val Ala Thr Asn His Gln Ser Ala Gln Ala Gln Ala Gln
580 585 590

Thr Gly Trp Val Gln Asn Gln Gly Ile Leu Pro Gly Met Val Trp Gln
595 600 605

Asp Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His
610 615 620

Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Met
625 630 635 640

Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
645 650 655

Asp Pro Pro Thr Ala Phe Asn Lys Asp Lys Leu Asn Ser Phe Ile Thr
660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln
675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn
690 695 700

Tyr Tyr Lys Ser Asn Asn Val Glu Phe Ala Val Asn Thr Glu Gly Val
705 710 715 720

Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
725 730 735

<210> 36
<211> 736
<212> PRT
<213> Macaca fascicularis

<400> 36

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ala Gly Ile Gly
145 150 155 160

Lys Ser Gly Ala Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Thr Glu Ser Val Pro Asp Pro Gln Pro Ile Gly Glu Pro Pro
180 185 190

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

Ala Pro Val Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Gln Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu

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

Gly Pro Ser Tyr Arg Gln Gln Arg Val Ser Thr Thr Val Thr Gln Asn
485 490 495

Asn Asn Ser Glu Phe Ala Trp Pro Gly Ala Ser Ser Trp Ala Leu Asn
500 505 510

Gly Arg Asn Ser Leu Met Asn Pro Gly Pro Ala Met Ala Ser His Lys
515 520 525

Glu Gly Glu Asp Arg Phe Phe Pro Leu Ser Gly Ser Leu Ile Phe Gly
530 535 540

Lys Gln Gly Thr Gly Arg Asp Asn Val Asp Ala Asp Lys Val Met Ile
545 550 555 560

Thr Asn Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu Ser
565 570 575

Tyr Gly Gln Val Ala Thr Asn His Gln Ser Ala Gln Ala Gln Ala Gln
580 585 590

Thr Gly Trp Val Gln Asn Gln Gly Ile Leu Pro Gly Met Val Trp Gln
595 600 605

Asp Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His
610 615 620

Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Met
625 630 635 640

Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
645 650 655

Asp Pro Pro Thr Ala Phe Asn Lys Asp Lys Leu Asn Ser Phe Ile Thr
660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln
675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn
690 695 700

Tyr Tyr Lys Ser Asn Asn Val Glu Phe Ala Val Asn Thr Glu Gly Val

705		710		715		720									
Tyr	Ser	Glu	Pro	Arg	Pro	Ile	Gly	Thr	Arg	Tyr	Leu	Thr	Arg	Asn	Leu
				725					730					735	
<210> 37 <211> 733 <212> PRT <213> Macaca fascicularis <400> 37															
Met	Ala	Ala	Asp	Gly	Tyr	Leu	Pro	Asp	Trp	Leu	Glu	Asp	Asn	Leu	Ser
1				5					10					15	
Glu	Gly	Ile	Arg	Glu	Trp	Trp	Ala	Leu	Lys	Pro	Gly	Ala	Pro	Gln	Pro
			20					25					30		
Lys	Ala	Asn	Gln	Gln	Lys	Gln	Asp	Asp	Gly	Arg	Gly	Leu	Val	Leu	Pro
		35					40					45			
Gly	Tyr	Lys	Tyr	Leu	Gly	Pro	Phe	Asn	Gly	Leu	Asp	Lys	Gly	Glu	Pro
	50					55					60				
Val	Asn	Glu	Ala	Asp	Ala	Ala	Ala	Leu	Glu	His	Asp	Lys	Ala	Tyr	Asp
65					70					75					80
Gln	Gln	Leu	Lys	Ala	Gly	Asp	Asn	Pro	Tyr	Leu	Arg	Tyr	Asn	His	Ala
				85					90					95	
Asp	Ala	Glu	Phe	Gln	Glu	Arg	Leu	Gln	Glu	Asp	Thr	Ser	Phe	Gly	Gly
			100					105					110		
Asn	Leu	Gly	Arg	Ala	Val	Phe	Gln	Ala	Lys	Lys	Arg	Val	Leu	Glu	Pro
		115					120					125			
Leu	Gly	Leu	Val	Glu	Glu	Ala	Ala	Lys	Thr	Ala	Pro	Gly	Lys	Lys	Arg
	130					135					140				
Pro	Val	Glu	Gln	Ser	Pro	Gln	Glu	Pro	Asp	Ser	Ser	Ala	Gly	Ile	Gly
145					150					155					160
Lys	Ser	Gly	Ala	Gln	Pro	Ala	Lys	Lys	Arg	Leu	Asn	Phe	Gly	Gln	Thr
				165					170					175	

Gly Asp Thr Glu Ser Val Pro Asp Pro Gln Pro Ile Gly Glu Pro Pro
180 185 190

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

Ala Pro Val Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Arg Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Ser Thr Ser Gly Gly Ser Ser Asn Asp Asn
260 265 270

Ala Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Asp Asn Asn Gly Ala Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Asp Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Glu Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asp
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Glu
405 410 415

Phe Glu Asn Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser
435 440 445

Lys Thr Ile Asn Gly Ser Gly Gln Asn Gln Gln Thr Leu Lys Phe Ser
450 455 460

Val Ala Gly Pro Ser Asn Met Ala Val Gln Gly Arg Asn Tyr Ile Pro
465 470 475 480

Gly Pro Ser Tyr Arg Gln Gln Arg Val Ser Thr Thr Val Thr Gln Asn
485 490 495

Asn Asn Ser Glu Phe Ala Trp Pro Gly Ala Ser Ser Trp Ala Leu Asn
500 505 510

Gly Arg Asn Ser Leu Met Asn Pro Gly Pro Ala Met Ala Ser His Lys
515 520 525

Glu Gly Glu Asp Arg Phe Phe Pro Leu Ser Gly Ser Leu Ile Phe Gly
530 535 540

Lys Gln Gly Thr Gly Arg Asp Asn Val Asp Ala Asp Lys Val Met Ile
545 550 555 560

Thr Asn Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu Ser
565 570 575

Tyr Gly Gln Val Ala Thr Asn His Gln Ser Ala Gln Ala Gln Ala Gln
580 585 590

Thr Gly Trp Val Gln Asn Gln Gly Ile Leu Pro Gly Met Val Trp Gln
595 600 605

Asp Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His
610 615 620

Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Met
625 630 635 640

Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
645 650 655

Asp Pro Pro Thr Ala Phe Asn Lys Asp Lys Leu Asn Ser Phe Ile Thr
660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln
675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn
690 695 700

Tyr Tyr Lys Ser Asn Asn Val Glu Phe Ala Val Asn Thr Glu Gly Val
705 710 715 720

Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr
725 730

<210> 38
<211> 730
<212> PRT
<213> *Macaca fascicularis*

<400> 38

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Leu Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Asp Ser Pro Asp Ser Thr Ser Gly Ile Gly Lys Lys Gly Gln
145 150 155 160

Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr Gly Asp Ala Glu
165 170 175

Ser Val Pro Asp Pro Gln Pro Ile Gly Glu Pro Pro Ala Ala Pro Ser
180 185 190

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

Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asn Trp
210 215 220

His Cys Asp Ser Thr Trp Leu Gly Asn Arg Val Ile Thr Thr Ser Thr
225 230 235 240

Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu Tyr Lys Gln Ile
245 250 255

Ser Ser Ser Ser Ser Gly Ala Thr Asn Asp Asn His Tyr Phe Gly Tyr
260 265 270

Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Cys His Phe
275 280 285

Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp Gly Phe Arg
290 295 300

Pro Lys Arg Leu Arg Phe Lys Leu Phe Asn Ile Gln Val Lys Glu Val
305 310 315 320

Thr Thr Asn Asp Gly Val Thr Thr Ile Ala Asn Asn Leu Thr Ser Thr
325 330 335

Val Gln Val Phe Ser Asp Ser Glu Tyr Gln Leu Pro Tyr Val Leu Gly

340	345	350
Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp Val Phe Met		
355	360	365
Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser Gln Ser Val		
370	375	380
Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser Gln Met Leu		
385	390	400
Arg Thr Gly Asn Asn Phe Glu Phe Ser Tyr Glu Phe Glu Asp Val Pro		
	405	410
		415
Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg Leu Met Asn		
	420	425
		430
Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ala Arg Thr Gln Ser Ser		
	435	440
		445
Thr Gly Thr Ser Thr Arg Glu Leu Gln Phe His Gln Ala Gly Pro Ala		
	450	455
		460
Thr Met Ala Glu Gln Ser Lys Asn Trp Leu Pro Gly Pro Cys Phe Arg		
465	470	475
		480
Gln Gln Arg Ile Ser Lys Thr Thr Asp Asn Asn Asn Asn Ser Asn Phe		
	485	490
		495
Ala Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly Arg Ser Ser Leu		
	500	505
		510
Thr Asn Pro Gly Val Pro Met Ala Thr His Lys Asp Asp Glu Ser Val		
	515	520
		525
Phe Phe Pro Ile Asn Gly Val Leu Val Phe Gly Lys Thr Gly Ala Ser		
530	535	540
Asn Lys Thr Thr Leu Glu Asn Val Leu Met Thr Asp Glu Glu Glu Ile		
545	550	555
		560
Lys Ala Thr Asn Pro Val Ala Thr Glu Glu Tyr Gly Val Val Ser Ser		
	565	570
		575

Asn Ile Gln Ser Gln Asn Ser Asn Pro Thr Thr Gln Thr Val Asn Asn
580 585 590

Gln Gly Ala Leu Pro Gly Met Val Trp Gln Asn Arg Asp Val Tyr Leu
595 600 605

Gln Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly Asn Phe His
610 615 620

Pro Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln
625 630 635 640

Ile Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Pro Glu Thr Phe
645 650 655

Thr Pro Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln
660 665 670

Val Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg
675 680 685

Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asp Lys Gln Thr Gly
690 695 700

Val Gly Phe Ala Val Asp Thr Gln Gly Val Tyr Ser Glu Pro Arg Pro
705 710 715 720

Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
725 730

<210> 39
<211> 730
<212> PRT
<213> *Macaca fascicularis*

<400> 39

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Asp Ser Pro Asp Ser Thr Ser Gly Ile Gly Lys Lys Gly Gln
145 150 155 160

Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr Gly Asp Ala Glu
165 170 175

Ser Val Pro Asp Pro Gln Pro Ile Gly Glu Pro Pro Ala Ala Pro Ser
180 185 190

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

Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asn Trp
210 215 220

His Cys Asp Ser Thr Trp Leu Gly Asn Arg Val Ile Thr Thr Ser Thr
225 230 235 240

Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu Tyr Lys Gln Ile
245 250 255

Ser Ser Ser Ser Ser Gly Ala Thr Asn Asp Asn His Tyr Phe Gly Tyr
260 265 270

Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Cys His Phe
275 280 285

Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp Gly Phe Arg
290 295 300

Pro Lys Arg Leu Arg Phe Lys Leu Phe Asn Ile Gln Val Lys Glu Val
305 310 315 320

Thr Thr Asn Asp Gly Val Thr Thr Ile Ala Asn Asn Leu Thr Ser Thr
325 330 335

Val Gln Val Phe Ser Asp Ser Glu Tyr Gln Leu Pro Tyr Val Leu Gly
340 345 350

Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp Val Phe Met
355 360 365

Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser Gln Ser Val
370 375 380

Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser Gln Met Leu
385 390 395 400

Arg Thr Gly Asn Asn Phe Glu Phe Ser Tyr Glu Phe Glu Asp Val Pro
405 410 415

Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg Leu Met Asn
420 425 430

Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ala Arg Thr Gln Ser Ser
435 440 445

Thr Gly Thr Ser Thr Arg Glu Leu Gln Phe His Gln Ala Gly Pro Ala
450 455 460

Thr Met Ala Glu Gln Ser Lys Asn Trp Leu Pro Gly Pro Cys Phe Arg
465 470 475 480

Gln Gln Arg Ile Ser Lys Thr Thr Asp Asn Asn Asn Ser Asn Phe
485 490 495

Ala Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly Arg Asn Ser Leu
500 505 510

Thr Asn Pro Gly Val Pro Met Ala Thr His Lys Asp Asp Glu Ser Val
515 520 525

Phe Phe Pro Ile Asn Gly Val Leu Val Phe Gly Lys Thr Gly Ala Ser
530 535 540

Asn Lys Thr Thr Leu Glu Asn Val Leu Met Thr Asp Glu Glu Glu Ile
545 550 555 560

Lys Ala Thr Asn Pro Val Ala Thr Glu Glu Tyr Gly Val Val Ser Ser
565 570 575

Asn Ile Gln Ser Gln Asn Ser Asn Pro Thr Thr Gln Thr Val Asn Asn
580 585 590

Gln Gly Ala Leu Pro Gly Met Val Trp Gln Asn Arg Asp Val Tyr Leu
595 600 605

Gln Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly Asn Phe His
610 615 620

Pro Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln
625 630 635 640

Ile Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Pro Glu Thr Phe
645 650 655

Thr Pro Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln
660 665 670

Val Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg
675 680 685

Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asp Lys Gln Thr Gly
690 695 700

Val Asp Phe Ala Val Asp Thr Gln Gly Val Tyr Ser Glu Pro Arg Pro
705 710 715 720

Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
725 730

<210> 40
<211> 736
<212> PRT
<213> Macaca fascicularis

<400> 40

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Pro Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Phe Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Thr Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

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

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Ser Thr Ser Gly Gly Ser Thr Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Thr Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Leu Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Val

435																
Arg	Thr	Gln	Thr	Thr	Gly	Thr	Gly	Gly	Thr	Gln	Thr	Leu	Ala	Phe	Ser	
450						455					460					
Gln	Ala	Gly	Pro	Ser	Ser	Met	Ala	Asn	Gln	Ala	Arg	Asn	Trp	Val	Pro	
465					470					475					480	
Gly	Pro	Ser	Tyr	Arg	Gln	Gln	Arg	Val	Ser	Thr	Thr	Lys	Asn	Gln	Asn	
				485					490					495		
Asn	Asn	Ser	Asn	Phe	Ala	Trp	Thr	Gly	Ala	Ala	Lys	Phe	Lys	Leu	Asn	
			500					505					510			
Gly	Arg	Asn	Ser	Leu	Met	Asn	Pro	Gly	Val	Ala	Met	Ala	Ser	His	Lys	
		515					520					525				
Asp	Asp	Glu	Asp	Arg	Phe	Phe	Pro	Ser	Ser	Gly	Val	Leu	Ile	Phe	Gly	
530						535					540					
Lys	Gln	Gly	Ala	Gly	Asn	Asp	Gly	Val	Asp	Tyr	Ser	Gln	Val	Leu	Ile	
545					550					555					560	
Thr	Asp	Glu	Glu	Glu	Ile	Lys	Ala	Thr	Asn	Pro	Val	Ala	Thr	Glu	Glu	
				565					570					575		
Tyr	Gly	Glu	Val	Ala	Ile	Asn	Asp	Gln	Ala	Ala	Asn	Thr	Gln	Ala	Gln	
			580					585					590			
Thr	Gly	Leu	Val	His	Asn	Gln	Gly	Val	Ile	Pro	Gly	Met	Val	Trp	Gln	
		595					600					605				
Asn	Arg	Asp	Val	Tyr	Leu	Gln	Gly	Pro	Ile	Trp	Ala	Lys	Ile	Pro	His	
610						615					620					
Thr	Asp	Gly	Asn	Phe	His	Pro	Ser	Pro	Leu	Met	Gly	Gly	Phe	Gly	Leu	
625					630					635					640	
Met	His	Pro	Pro	Pro	Gln	Ile	Leu	Ile	Lys	Asn	Thr	Pro	Val	Pro	Ala	
				645					650					655		
Asp	Pro	Pro	Leu	Thr	Phe	Asn	Gln	Ala	Lys	Leu	Asn	Ser	Phe	Ile	Thr	
			660					665					670			

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln
675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn
690 695 700

Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Ser Asp Gly Val
705 710 715 720

Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
725 730 735

<210> 41
<211> 736
<212> PRT
<213> Macaca fascicularis

<400> 41

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Gly Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Thr Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

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

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Ser Thr Ser Gly Gly Ser Thr Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Pro Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Thr Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Ala Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Leu Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Val
435 440 445

Arg Thr Gln Thr Thr Gly Thr Gly Gly Thr Gln Thr Leu Ala Phe Ser
450 455 460

Gln Ala Gly Pro Ser Ser Met Ala Asn Gln Ala Arg Asn Trp Val Pro
465 470 475 480

Gly Pro Ser Tyr Arg Gln Gln Arg Val Ser Thr Thr Lys Asn Gln Asn
485 490 495

Asn Asn Ser Asn Phe Ala Trp Thr Gly Ala Ala Lys Phe Lys Leu Asn
500 505 510

Gly Arg Asn Ser Leu Met Asn Pro Gly Val Ala Met Ala Ser His Lys
515 520 525

Asp Asp Glu Asp Arg Phe Ser Pro Ser Ser Gly Val Leu Ile Phe Gly
530 535 540

Lys Gln Gly Ala Gly Asn Asp Gly Val Asp Tyr Ser Gln Val Leu Ile
545 550 555 560

Thr Asp Glu Glu Glu Ile Lys Ala Thr Asn Pro Val Ala Thr Glu Glu
565 570 575

Tyr Gly Glu Val Ala Ile Asn Asp Gln Ala Ala Asn Thr Gln Ala Gln
580 585 590

Thr Gly Leu Val His Asn Gln Gly Val Ile Pro Gly Met Val Trp Gln
595 600 605

Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His
610 615 620

Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Leu
625 630 635 640

Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
645 650 655

Asp Pro Pro Leu Thr Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile Thr
660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln
675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn
690 695 700

Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Ser Asp Gly Val
705 710 715 720

Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
725 730 735

<210> 42
<211> 736
<212> PRT
<213> Macaca fascicularis

<400> 42

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp

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

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Thr Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Leu Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Val
435 440 445

Arg Thr Gln Thr Thr Gly Thr Gly Gly Thr Gln Ile Leu Ala Phe Ser
450 455 460

Gln Ala Gly Pro Ser Ser Met Ala Asn Gln Ala Arg Asn Trp Val Pro
465 470 475 480

Gly Pro Ser Tyr Arg Gln Gln Arg Val Ser Thr Thr Lys Asn Gln Asn
485 490 495

Asn Asn Ser Asn Phe Ala Trp Thr Gly Ala Ala Lys Phe Lys Leu Asn
500 505 510

Gly Arg Asn Ser Leu Met Asn Pro Gly Val Ala Met Ala Ser His Lys
515 520 525

Asp Asp Glu Asp Arg Phe Phe Pro Ser Ser Gly Val Leu Ile Phe Gly

530	535	540
Lys Gln Gly Ala Gly Asn Asp Gly Met Asp Tyr Ser Gln Val Leu Ile 545 550 555 560		
Thr Asp Glu Glu Glu Ile Lys Ala Thr Asn Pro Val Ala Thr Glu Glu 565 570 575		
Tyr Gly Glu Val Ala Ile Asn Asp Gln Ala Ala Asn Thr Gln Ala Gln 580 585 590		
Thr Gly Leu Val His Asn Gln Gly Val Ile Pro Gly Met Val Trp Gln 595 600 605		
Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His 610 615 620		
Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Leu 625 630 635 640		
Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala 645 650 655		
Asp Pro Pro Leu Thr Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile Thr 660 665 670		
Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln 675 680 685		
Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn 690 695 700		
Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Ser Asp Gly Val 705 710 715 720		
Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu 725 730 735		

<210> 43
 <211> 736
 <212> PRT
 <213> *Macaca fascicularis*
 <400> 43

Met	Ala	Ala	Asp	Gly	Tyr	Leu	Pro	Asp	Trp	Leu	Glu	Asp	Asn	Leu	Ser	1	5	10	15
Glu	Gly	Ile	Arg	Glu	Trp	Trp	Asp	Leu	Lys	Pro	Gly	Ala	Pro	Lys	Pro	20	25	30	
Lys	Ala	Asn	Gln	Gln	Lys	Gln	Asp	Asp	Gly	Arg	Gly	Leu	Val	Leu	Pro	35	40	45	
Gly	Tyr	Lys	Tyr	Leu	Gly	Pro	Phe	Asn	Gly	Leu	Asp	Lys	Gly	Glu	Pro	50	55	60	
Val	Asn	Ala	Ala	Asp	Ala	Ala	Ala	Leu	Glu	His	Asp	Lys	Ala	Tyr	Asp	65	70	75	80
Gln	Gln	Leu	Lys	Ala	Gly	Asp	Asn	Pro	Tyr	Leu	Arg	Tyr	Asn	His	Ala	85	90	95	
Asp	Ala	Glu	Phe	Gln	Glu	Arg	Leu	Gln	Glu	Asp	Thr	Ser	Phe	Gly	Gly	100	105	110	
Asn	Leu	Gly	Arg	Ala	Val	Phe	Gln	Ala	Lys	Lys	Arg	Val	Leu	Glu	Pro	115	120	125	
Leu	Gly	Leu	Val	Glu	Glu	Gly	Ala	Lys	Thr	Ala	Pro	Gly	Lys	Lys	Arg	130	135	140	
Pro	Val	Glu	Gln	Ser	Pro	Gln	Glu	Pro	Asp	Ser	Ser	Ser	Gly	Ile	Gly	145	150	155	160
Lys	Thr	Gly	Gln	Gln	Pro	Ala	Lys	Lys	Arg	Leu	Asn	Phe	Gly	Gln	Thr	165	170	175	
Gly	Asp	Ser	Glu	Ser	Val	Pro	Asp	Pro	Gln	Pro	Leu	Gly	Glu	Pro	Pro	180	185	190	
Ala	Ala	Pro	Ser	Gly	Leu	Gly	Pro	Asn	Thr	Met	Ala	Ser	Gly	Gly	Gly	195	200	205	
Ala	Pro	Met	Ala	Asp	Asn	Asn	Glu	Gly	Ala	Asp	Gly	Val	Gly	Asn	Ser	210	215	220	
Ser	Gly	Asn	Trp	His	Cys	Asp	Ser	Thr	Trp	Leu	Gly	Asp	Arg	Val	Ile	225	230	235	240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Ser Thr Ser Gly Gly Gly Thr Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Thr Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Val Pro Gln Tyr Gly His Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Leu Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Val
435 440 445

Arg Thr Gln Thr Thr Gly Thr Gly Gly Thr Gln Thr Leu Ala Phe Ser
450 455 460

Gln Ala Gly Pro Ser Ser Met Ala Asn Gln Ala Arg Asn Trp Val Pro
465 470 475 480

Gly Pro Ser Tyr Arg Gln Gln Arg Val Ser Thr Thr Lys Asp Gln Asn
485 490 495

Asn Asn Ser Asn Phe Ala Trp Thr Gly Ala Ala Lys Phe Lys Leu Asn
500 505 510

Gly Arg Asn Ser Leu Met Asn Pro Gly Val Ala Met Ala Ser His Lys
515 520 525

Asp Asp Glu Asp Arg Phe Phe Pro Ser Ser Gly Val Leu Ile Phe Gly
530 535 540

Lys Gln Gly Ala Gly Asn Asp Gly Val Asp Tyr Ser Gln Val Leu Ile
545 550 555 560

Thr Asp Glu Glu Glu Ile Lys Ala Thr Asn Pro Val Ala Thr Glu Glu
565 570 575

Tyr Gly Glu Val Ala Val Asn Asp Gln Ala Ala Asn Thr Gln Ala Gln
580 585 590

Thr Gly Leu Val His Asn Gln Gly Val Ile Pro Gly Met Val Trp Gln
595 600 605

Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His
610 615 620

Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Leu
625 630 635 640

Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
645 650 655

Asp Pro Pro Leu Thr Leu Asn Gln Ala Lys Leu Asn Ser Phe Ile Thr
660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln
675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn
690 695 700

Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Ser Asp Gly Val
705 710 715 720

Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
725 730 735

<210> 44
<211> 730
<212> PRT
<213> Macaca fascicularis

<400> 44

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Asp Ser Pro Asp Ser Thr Ser Gly Ile Gly Lys Lys Gly Gln
145 150 155 160

Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr Gly Asp Ala Glu

165

170

175

Ser Val Pro Asp Pro Gln Pro Ile Gly Glu Pro Pro Ala Ala Pro Ser
180 185 190

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

Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ala Pro Gly Asn Trp
210 215 220

His Cys Asp Ser Thr Trp Leu Gly Asn Arg Val Ile Thr Thr Ser Thr
225 230 235 240

Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu Tyr Lys Gln Ile
245 250 255

Ser Ser Ser Ser Ser Gly Ala Thr Asn Asp Asn His Tyr Phe Gly Tyr
260 265 270

Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Cys His Phe
275 280 285

Ser Pro Arg Asp Trp Pro Arg Leu Ile Asn Asn Asn Trp Gly Phe Arg
290 295 300

Pro Lys Arg Leu Arg Phe Lys Leu Phe Asn Ile Gln Val Lys Glu Val
305 310 315 320

Thr Thr Asn Asp Gly Val Thr Thr Ile Ala Asn Asn Leu Thr Ser Thr
325 330 335

Val Gln Val Phe Ser Asp Ser Glu Tyr Gln Leu Pro Tyr Val Leu Gly
340 345 350

Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp Val Phe Met
355 360 365

Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser Gln Ser Val
370 375 380

Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser Gln Met Leu
385 390 395 400

Arg Thr Gly Asn Asn Phe Glu Phe Ser Tyr Glu Phe Glu Asp Val Pro
405 410 415

Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg Leu Met Asn
420 425 430

Pro Leu Ile Asp Gln Tyr Pro Tyr Tyr Leu Ala Arg Thr Gln Ser Ser
435 440 445

Thr Gly Thr Ser Thr Arg Glu Leu Gln Phe His Gln Ala Gly Pro Ala
450 455 460

Thr Met Ala Glu Gln Ser Lys Asn Trp Leu Pro Gly Pro Cys Phe Arg
465 470 475 480

Gln Gln Arg Ile Ser Lys Thr Thr Asp Asn Asn Asn Asn Ser Asn Phe
485 490 495

Ala Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly Arg Asn Ser Leu
500 505 510

Thr Asn Pro Gly Val Pro Met Ala Thr His Lys Asp Asp Glu Ser Val
515 520 525

Phe Phe Pro Ile Asn Gly Val Leu Val Phe Gly Lys Thr Gly Ala Ser
530 535 540

Asn Lys Thr Thr Leu Glu Asn Val Leu Met Thr Asp Glu Glu Glu Ile
545 550 555 560

Lys Ala Thr Asn Pro Val Ala Thr Glu Glu Tyr Gly Val Val Ser Ser
565 570 575

Asn Ile Gln Ser Gln Asn Ser Asn Pro Ala Thr Gln Thr Val Asn Asn
580 585 590

Gln Gly Ala Leu Pro Gly Met Val Trp Gln Asn Arg Asp Val Tyr Leu
595 600 605

Gln Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly Asn Phe His
610 615 620

Pro Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln

625		630		635		640									
Ile	Leu	Ile	Lys	Asn	Thr	Pro	Val	Pro	Ala	Asn	Pro	Pro	Glu	Thr	Phe
			645						650					655	
Thr	Pro	Ala	Lys	Phe	Ala	Ser	Phe	Ile	Thr	Gln	Tyr	Ser	Thr	Gly	Gln
			660					665					670		
Val	Ser	Val	Glu	Ile	Glu	Trp	Glu	Leu	Gln	Lys	Glu	Asn	Ser	Lys	Arg
		675					680					685			
Trp	Asn	Pro	Glu	Ile	Gln	Tyr	Thr	Ser	Asn	Tyr	Asp	Lys	Gln	Thr	Gly
	690					695					700				
Val	Asp	Phe	Ala	Val	Asp	Thr	Gln	Gly	Val	Tyr	Ser	Glu	Pro	Arg	Pro
705					710					715					720
Ile	Gly	Thr	Arg	Tyr	Leu	Thr	Arg	Asn	Leu						
			725						730						
<210> 45															
<211> 730															
<212> PRT															
<213> Macaca fascicularis															
<400> 45															
Met	Ala	Ala	Asp	Gly	Tyr	Leu	Pro	Asp	Trp	Leu	Glu	Asp	Asn	Leu	Ser
1				5					10					15	
Glu	Gly	Ile	Arg	Glu	Trp	Trp	Ala	Leu	Lys	Pro	Gly	Ala	Pro	Gln	Pro
			20					25					30		
Lys	Ala	Asn	Gln	Gln	Lys	Gln	Asp	Asp	Gly	Arg	Gly	Leu	Met	Leu	Pro
		35					40					45			
Gly	Tyr	Lys	Tyr	Leu	Gly	Pro	Phe	Asn	Gly	Leu	Asp	Lys	Gly	Glu	Pro
	50					55					60				
Val	Asn	Glu	Ala	Asp	Ala	Ala	Ala	Leu	Glu	His	Asp	Lys	Ala	Tyr	Asp
65					70					75					80
Gln	Gln	Leu	Lys	Ala	Gly	Asp	Asn	Pro	Tyr	Leu	Arg	Tyr	Asn	His	Ala
				85					90					95	

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Asp Ser Pro Asp Ser Thr Ser Gly Ile Gly Lys Lys Gly Gln
145 150 155 160

Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr Gly Asp Ala Glu
165 170 175

Ser Val Pro Asp Pro Gln Pro Ile Gly Glu Pro Pro Ala Ala Pro Ser
180 185 190

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

Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Ser Trp
210 215 220

His Cys Asp Ser Thr Trp Leu Gly Asn Arg Val Ile Thr Thr Ser Thr
225 230 235 240

Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu Tyr Lys Gln Ile
245 250 255

Ser Ser Ser Ser Ser Gly Ala Thr Asn Asp Asn His Tyr Phe Gly Tyr
260 265 270

Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Cys His Phe
275 280 285

Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp Gly Phe Arg
290 295 300

Pro Lys Arg Leu Arg Phe Lys Leu Phe Asn Ile Gln Val Lys Glu Val
305 310 315 320

Thr Thr Asn Asp Gly Val Thr Thr Ile Ala Asn Asn Leu Thr Ser Thr
325 330 335

Val Gln Val Phe Ser Asp Ser Glu Tyr Gln Leu Pro Tyr Val Leu Gly
340 345 350

Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp Val Phe Met
355 360 365

Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Arg Gln Ser Val
370 375 380

Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser Gln Met Leu
385 390 395 400

Arg Thr Gly Asn Asn Phe Glu Phe Ser Tyr Glu Phe Glu Asp Val Pro
405 410 415

Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg Leu Met Asn
420 425 430

Pro Leu Ile Asp Gln Tyr Pro Tyr Tyr Leu Ala Arg Thr Gln Ser Ser
435 440 445

Thr Gly Thr Ser Thr Arg Glu Leu Gln Phe His Gln Ala Gly Pro Ala
450 455 460

Thr Met Ala Glu Gln Ser Lys Asn Trp Leu Pro Gly Pro Cys Phe Arg
465 470 475 480

Gln Gln Arg Ile Ser Lys Thr Thr Asp Asn Asn Asn Asn Ser Asn Phe
485 490 495

Ala Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly Arg Asn Ser Leu
500 505 510

Thr Asn Pro Gly Val Pro Met Ala Thr His Lys Asp Asp Glu Ser Val
515 520 525

Phe Phe Pro Ile Asn Gly Val Leu Val Phe Gly Lys Thr Gly Ala Ser
530 535 540

Asn Lys Thr Thr Leu Glu Asn Val Pro Met Thr Asp Glu Glu Glu Ile
545 550 555 560

Lys Ala Thr Asn Pro Val Ala Thr Glu Glu Tyr Gly Val Val Ser Ser
565 570 575

Asn Ile Gln Ser Gln Asn Ser Asn Pro Thr Thr Gln Thr Val Asn Asn
580 585 590

Gln Gly Ala Leu Pro Gly Met Val Trp Gln Asn Arg Asp Val Tyr Leu
595 600 605

Gln Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly Asn Phe His
610 615 620

Pro Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln
625 630 635 640

Ile Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Pro Glu Thr Phe
645 650 655

Thr Pro Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln
660 665 670

Val Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Asn Lys Arg
675 680 685

Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asp Lys Gln Thr Gly
690 695 700

Val Asp Phe Ala Val Asp Thr Gln Gly Val Tyr Ser Glu Pro Arg Pro
705 710 715 720

Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
725 730

<210> 46
<211> 730
<212> PRT
<213> Macaca fascicularis

<400> 46

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Ser Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Asp Ser Pro Asp Ser Thr Ser Gly Ile Gly Lys Lys Gly Gln
145 150 155 160

Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr Gly Asp Ala Glu
165 170 175

Ser Val Pro Asp Pro Gln Pro Ile Gly Glu Pro Pro Ala Ala Pro Ser
180 185 190

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

Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asn Trp
210 215 220

His Cys Asp Ser Thr Trp Leu Gly Asn Arg Val Ile Thr Thr Ser Thr
225 230 235 240

Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asp His Leu Tyr Lys Gln Ile
245 250 255

Ser Ser Ser Ser Ser Gly Ala Thr Asn Asp Asn His Tyr Phe Gly Tyr

260

265

270

Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Cys His Phe
 275 280 285

Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp Gly Phe Arg
 290 295 300

Pro Lys Arg Leu Arg Phe Lys Leu Phe Asn Ile Gln Val Lys Glu Val
 305 310 315 320

Thr Thr Asn Asp Gly Val Thr Thr Ile Ala Asn Asn Leu Thr Ser Thr
 325 330 335

Val Gln Val Phe Ser Asp Ser Glu Tyr Gln Leu Pro Tyr Val Leu Gly
 340 345 350

Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp Val Phe Met
 355 360 365

Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser Gln Ser Val
 370 375 380

Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser Gln Met Leu
 385 390 395 400

Arg Thr Gly Asn Asn Phe Glu Phe Ser Tyr Glu Phe Glu Asp Val Pro
 405 410 415

Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg Leu Met Asn
 420 425 430

Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ala Arg Thr Gln Ser Ser
 435 440 445

Thr Gly Thr Ser Thr Arg Glu Leu Gln Phe His Gln Ala Gly Pro Ala
 450 455 460

Thr Met Ala Glu Gln Ser Lys Asn Trp Leu Pro Gly Pro Cys Phe Arg
 465 470 475 480

Gln Gln Arg Ile Ser Lys Thr Thr Asp Asn Asn Asn Asn Ser Asn Phe
 485 490 495

Ala Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly Arg Asn Ser Leu
500 505 510

Thr Asn Pro Gly Val Pro Met Ala Thr His Lys Asp Asp Glu Ser Val
515 520 525

Phe Phe Pro Ile Asn Gly Val Leu Val Phe Gly Lys Thr Gly Ala Ser
530 535 540

Asn Lys Thr Thr Leu Glu Asn Val Leu Met Thr Asp Glu Glu Glu Ile
545 550 555 560

Lys Ala Thr Asn Pro Val Ala Thr Glu Glu Tyr Gly Val Val Ser Ser
565 570 575

Asn Ile Gln Ser Gln Asn Ser Asn Pro Thr Thr Gln Thr Val Asn Asn
580 585 590

Gln Gly Ala Leu Pro Gly Met Val Trp Arg Asn Arg Asp Val Tyr Leu
595 600 605

Gln Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly Asn Phe His
610 615 620

Pro Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln
625 630 635 640

Ile Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Pro Glu Thr Phe
645 650 655

Thr Pro Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln
660 665 670

Val Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg
675 680 685

Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asp Lys Gln Thr Gly
690 695 700

Val Asp Phe Ala Val Asp Thr Gln Gly Val Tyr Ser Glu Pro Arg Pro
705 710 715 720

Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu

725

730

<210> 47
 <211> 730
 <212> PRT
 <213> *Macaca fascicularis*

<400> 47

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
 1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
 20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
 35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
 50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
 65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
 85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
 100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
 115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Lys Arg
 130 135 140

Pro Val Asp Ser Pro Asp Ser Thr Ser Gly Ile Gly Lys Lys Gly Gln
 145 150 155 160

Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr Gly Asp Ala Glu
 165 170 175

Ser Val Pro Asp Pro Gln Pro Ile Gly Glu Pro Pro Ala Ala Pro Ser
 180 185 190

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

Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asn Trp
210 215 220

His Cys Asp Ser Thr Trp Leu Gly Asn Arg Val Ile Thr Thr Ser Thr
225 230 235 240

Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu Tyr Lys Gln Ile
245 250 255

Ser Ser Ser Ser Ser Gly Ala Thr Asn Asp Asn His Tyr Phe Gly Tyr
260 265 270

Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Cys His Phe
275 280 285

Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp Gly Phe Arg
290 295 300

Pro Lys Arg Leu Arg Phe Lys Leu Phe Asn Ile Gln Val Lys Glu Val
305 310 315 320

Thr Thr Asn Asp Gly Val Thr Thr Ile Ala Asn Asn Leu Thr Ser Thr
325 330 335

Val Gln Val Phe Ser Asp Ser Glu Tyr Gln Leu Pro Tyr Val Leu Gly
340 345 350

Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp Val Phe Met
355 360 365

Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser Gln Ser Val
370 375 380

Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser Gln Met Leu
385 390 395 400

Arg Thr Gly Asn Asn Phe Glu Phe Ser Tyr Glu Phe Glu Asp Val Pro
405 410 415

Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg Leu Met Asn
420 425 430

Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Met Ala Arg Thr Gln Ser Ser
435 440 445

Thr Gly Thr Ser Thr Arg Glu Pro Gln Phe His Gln Ala Gly Pro Ala
450 455 460

Thr Met Ala Glu Gln Ser Lys Asn Trp Leu Pro Gly Pro Cys Phe Arg
465 470 475 480

Gln Gln Arg Ile Ser Lys Thr Thr Asp Asn Asn Asn Asn Ser Asn Phe
485 490 495

Ala Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly Arg Asn Ser Leu
500 505 510

Thr Asn Pro Gly Val Pro Met Ala Thr His Lys Asp Asp Glu Ser Val
515 520 525

Phe Phe Pro Ile Asn Gly Val Leu Val Phe Gly Lys Thr Gly Ala Ser
530 535 540

Asn Lys Thr Thr Leu Glu Asn Val Leu Met Thr Asp Glu Glu Glu Ile
545 550 555 560

Lys Ala Thr Asn Pro Val Ala Thr Glu Glu Tyr Gly Val Val Ser Ser
565 570 575

Asn Ile Gln Ser Gln Asn Ser Asn Pro Thr Thr Gln Thr Val Asn Asn
580 585 590

Gln Gly Ala Leu Pro Gly Met Val Trp Gln Asn Arg Asp Val Tyr Leu
595 600 605

Gln Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly Asp Phe His
610 615 620

Pro Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln
625 630 635 640

Ile Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Pro Glu Thr Phe
645 650 655

Thr Pro Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln
660 665 670

Val Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg
675 680 685

Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asp Lys Gln Thr Gly
690 695 700

Val Asp Phe Ala Val Asp Thr Gln Gly Val Tyr Ser Glu Pro Arg Pro
705 710 715 720

Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
725 730

<210> 48
<211> 730
<212> PRT
<213> Macaca fascicularis

<400> 48

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Asp Ser Pro Asp Ser Thr Ser Gly Ile Gly Lys Lys Gly Gln
145 150 155 160

Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr Gly Asp Ala Glu
165 170 175

Ser Val Pro Asp Pro Gln Pro Ile Gly Glu Pro Pro Ala Ala Pro Ser
180 185 190

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

Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asn Trp
210 215 220

His Cys Asp Ser Thr Trp Leu Gly Asn Arg Val Ile Thr Thr Ser Thr
225 230 235 240

Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu Tyr Lys Gln Ile
245 250 255

Ser Ser Gly Ser Ser Gly Ala Thr Asn Asp Asn His Tyr Phe Gly Tyr
260 265 270

Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Cys His Phe
275 280 285

Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp Gly Phe Arg
290 295 300

Pro Lys Arg Leu Arg Phe Lys Leu Phe Asn Ile Gln Val Lys Glu Val
305 310 315 320

Thr Thr Asn Asp Gly Val Thr Thr Ile Ala Asn Asn Leu Thr Ser Thr
325 330 335

Val Gln Val Phe Ser Asp Ser Glu Tyr Gln Leu Pro Tyr Val Leu Gly
340 345 350

Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp Val Phe Met

355																
Ile	Pro	Gln	Tyr	Gly	Tyr	Leu	Thr	Leu	Asn	Asn	Gly	Ser	Gln	Ser	Val	
	370					375					380					
Gly	Arg	Ser	Ser	Phe	Tyr	Cys	Leu	Glu	Tyr	Phe	Pro	Ser	Gln	Val	Leu	
385					390					395					400	
Arg	Thr	Gly	Asn	Asn	Phe	Glu	Phe	Ser	Tyr	Glu	Phe	Glu	Asp	Val	Pro	
				405					410					415		
Phe	His	Ser	Ser	Tyr	Ala	His	Ser	Gln	Ser	Leu	Asp	Arg	Leu	Met	Asn	
			420					425					430			
Pro	Leu	Ile	Asp	Gln	Tyr	Leu	Tyr	Tyr	Leu	Ala	Arg	Thr	Gln	Ser	Ser	
		435					440					445				
Thr	Gly	Thr	Ser	Thr	Arg	Glu	Leu	Gln	Phe	His	Gln	Ala	Gly	Pro	Ala	
	450					455					460					
Thr	Met	Ala	Glu	Gln	Ser	Lys	Asn	Trp	Leu	Pro	Gly	Pro	Cys	Phe	Arg	
465					470					475					480	
Gln	Gln	Arg	Ile	Ser	Lys	Thr	Ser	Asp	Asn	Asn	Asn	Asn	Ser	Asn	Phe	
				485					490					495		
Ala	Trp	Thr	Gly	Ala	Thr	Lys	Tyr	His	Leu	Asn	Gly	Arg	Asn	Ser	Leu	
			500					505					510			
Thr	Asn	Pro	Gly	Val	Pro	Met	Ala	Thr	His	Lys	Asp	Asp	Glu	Ser	Val	
		515					520					525				
Phe	Phe	Pro	Ile	Asn	Gly	Val	Leu	Val	Phe	Gly	Lys	Thr	Gly	Ala	Ser	
	530					535					540					
Asn	Lys	Thr	Thr	Leu	Glu	Asn	Val	Leu	Met	Thr	Asp	Glu	Glu	Glu	Ile	
545					550					555					560	
Lys	Ala	Thr	Asn	Pro	Val	Ala	Thr	Glu	Glu	Tyr	Gly	Val	Val	Ser	Ser	
				565				570						575		
Asn	Ile	Gln	Ser	Gln	Asn	Ser	Asn	Pro	Thr	Thr	Gln	Thr	Val	Asn	Asn	
			580					585					590			

Gln Gly Ala Leu Pro Gly Met Val Trp Gln Asn Arg Asp Val Tyr Leu
595 600 605

Gln Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly Asn Phe His
610 615 620

Pro Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln
625 630 635 640

Ile Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Pro Glu Thr Phe
645 650 655

Thr Pro Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln
660 665 670

Val Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg
675 680 685

Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asp Lys Gln Thr Gly
690 695 700

Val Asp Phe Ala Val Asp Thr Gln Gly Val Tyr Ser Glu Pro Arg Pro
705 710 715 720

Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
725 730

<210> 49
<211> 730
<212> PRT
<213> Macaca fascicularis

<400> 49

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Arg Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Ile Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Glu Arg
130 135 140

Pro Val Asp Ser Pro Asp Ser Thr Ser Gly Ile Gly Lys Lys Gly Gln
145 150 155 160

Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr Gly Asp Ala Glu
165 170 175

Ser Val Pro Asp Pro Gln Pro Ile Gly Glu Pro Pro Ala Ala Pro Ser
180 185 190

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

Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asn Trp
210 215 220

His Cys Asp Ser Thr Trp Leu Gly Asn Arg Val Ile Thr Thr Ser Thr
225 230 235 240

Arg Thr Trp Ala Leu Pro Thr Tyr Asp Asn His Leu Tyr Lys Gln Ile
245 250 255

Ser Ser Ser Ser Ser Gly Ala Thr Asn Asp Asn His Tyr Phe Gly Tyr
260 265 270

Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Cys His Phe
275 280 285

Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp Gly Phe Arg
290 295 300

Pro Lys Arg Leu Arg Phe Lys Leu Phe Asn Ile Gln Val Lys Glu Val
305 310 315 320

Thr Thr Asn Asp Gly Val Thr Thr Ile Ala Asn Asn Leu Thr Ser Thr
325 330 335

Val Gln Val Phe Ser Asp Ser Glu Tyr Gln Leu Pro Tyr Val Leu Gly
340 345 350

Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp Val Phe Met
355 360 365

Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser Gln Ser Val
370 375 380

Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser Gln Met Leu
385 390 395 400

Arg Thr Gly Asn Asn Phe Glu Phe Ser Tyr Glu Phe Glu Asp Val Pro
405 410 415

Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg Leu Met Asn
420 425 430

Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ala Arg Thr Gln Ser Ser
435 440 445

Thr Gly Thr Ser Thr Arg Glu Leu Gln Phe His Gln Ala Gly Pro Ala
450 455 460

Thr Met Ala Glu Gln Ser Lys Asn Trp Leu Pro Gly Pro Cys Phe Arg
465 470 475 480

Gln Gln Arg Ile Ser Lys Thr Thr Asp Asn Asn Asn Ser Asn Phe
485 490 495

Ala Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly Arg Asn Ser Leu
500 505 510

Thr Asn Pro Gly Val Pro Met Ala Thr His Lys Asp Asp Glu Ser Val
515 520 525

Phe Phe Pro Ile Asn Gly Val Leu Val Leu Gly Lys Thr Gly Ala Ser
530 535 540

Asn Lys Thr Thr Leu Glu Asn Val Leu Met Thr Asp Glu Glu Glu Ile
545 550 555 560

Lys Ala Thr Asn Pro Val Ala Thr Glu Glu Tyr Gly Val Val Ser Ser
565 570 575

Asn Ile Gln Ser Gln Asn Ser Asn Pro Thr Thr Gln Thr Val Asn Asn
580 585 590

Gln Gly Ala Leu Pro Gly Met Val Trp Gln Asn Arg Asp Val Tyr Leu
595 600 605

Gln Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly Asn Phe His
610 615 620

Pro Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln
625 630 635 640

Ile Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Pro Glu Thr Phe
645 650 655

Thr Pro Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln
660 665 670

Val Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg
675 680 685

Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asp Lys Gln Thr Gly
690 695 700

Val Asp Phe Ala Val Asp Thr Gln Gly Val Tyr Ser Glu Pro Arg Pro
705 710 715 720

Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
725 730

<210> 50
<211> 730
<212> PRT
<213> Macaca fascicularis

<400> 50

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Arg Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Asp Ser Pro Asp Ser Thr Ser Gly Ile Gly Lys Lys Gly Gln
145 150 155 160

Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr Gly Asp Ala Glu
165 170 175

Ser Val Pro Asp Pro Gln Pro Ile Gly Glu Pro Pro Ala Ala Pro Ser
180 185 190

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

Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asn Trp
210 215 220

His Cys Asp Ser Thr Trp Leu Gly Asn Arg Val Ile Thr Thr Ser Thr
225 230 235 240

Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu Tyr Lys Gln Ile
245 250 255

Ser Ser Ser Ser Ser Gly Ala Thr Asn Asp Asn His Tyr Phe Gly Tyr
260 265 270

Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Cys His Phe
275 280 285

Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp Gly Phe Arg
290 295 300

Pro Lys Arg Leu Arg Phe Lys Leu Phe Asn Ile Gln Val Lys Glu Val
305 310 315 320

Thr Thr Asn Asp Gly Val Thr Thr Ile Ala Asn Asn Leu Thr Ser Thr
325 330 335

Val Gln Val Phe Ser Asp Ser Glu Tyr Gln Leu Pro Tyr Val Leu Gly
340 345 350

Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp Val Phe Met
355 360 365

Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser Gln Ser Val
370 375 380

Gly Arg Ser Ser Phe Tyr Arg Leu Glu Tyr Phe Pro Ser Gln Met Leu
385 390 395 400

Arg Thr Gly Asn Asn Phe Glu Phe Ser Tyr Glu Phe Glu Asp Val Pro
405 410 415

Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg Leu Met Asn
420 425 430

Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ala Arg Thr Gln Ser Ser
435 440 445

Thr Gly Thr Ser Thr Arg Glu Leu Gln Phe His Gln Ala Gly Pro Ala

450		455		460
Thr Met Ala Glu Gln Ser Lys Asn Trp Leu Pro Gly Pro Cys Phe Arg				
465		470		475
Gln Gln Arg Ile Ser Lys Thr Thr Asp Asn Asn Asn Asn Ser Asn Phe				
		485		490
Ala Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly Arg Asn Ser Leu				
		500		505
Thr Asn Pro Gly Val Pro Met Ala Thr His Arg Asp Asp Glu Ser Val				
		515		520
Phe Phe Pro Ile Asn Gly Val Leu Val Phe Gly Lys Thr Gly Ala Ser				
		530		535
Asn Lys Thr Thr Leu Glu Asn Val Leu Met Thr Asp Glu Glu Glu Ile				
		545		550
Lys Ala Thr Asn Pro Val Ala Thr Glu Glu Tyr Gly Val Val Ser Ser				
		565		570
Asn Ile Gln Ser Gln Asn Ser Asn Pro Thr Thr Gln Thr Val Asn Asn				
		580		585
Gln Gly Ala Leu Pro Gly Met Val Trp Gln Asn Arg Asp Val Tyr Leu				
		595		600
Gln Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly Asn Phe His				
		610		615
Pro Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln				
		625		630
Ile Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Pro Glu Thr Phe				
		645		650
Thr Pro Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln				
		660		665
Val Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg				
		675		680
				685

Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asp Lys Gln Thr Gly
690 695 700

Val Asp Phe Ala Val Asp Thr Gln Gly Val Tyr Ser Glu Pro Arg Pro
705 710 715 720

Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
725 730

<210> 51
<211> 736
<212> PRT
<213> Callithrix jacchus

<400> 51

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Thr Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Thr Glu Ser Val Pro Asp Pro Gln Pro Leu Arg Glu Pro Pro
180 185 190

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

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Pro Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Thr Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Pro Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala Arg Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Leu Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asp Asn Phe Gln Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Val
435 440 445

Arg Thr Gln Thr Thr Gly Thr Gly Gly Thr Gln Thr Leu Ala Phe Ser
450 455 460

Gln Ala Gly Pro Ser Ser Met Ala Asn Gln Ala Arg Asn Trp Val Pro
465 470 475 480

Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Thr Asn Gln Asn
485 490 495

Asn Asn Ser Asn Phe Ala Trp Thr Gly Ala Ala Lys Phe Lys Leu Asn
500 505 510

Gly Arg Asp Ser Leu Met Asn Pro Gly Val Ala Met Ala Ser His Lys
515 520 525

Asp Asp Glu Asp Arg Phe Phe Pro Ser Ser Gly Val Leu Ile Phe Gly
530 535 540

Lys Gln Gly Ala Gly Asn Asp Gly Val Asp Tyr Ser Gln Val Leu Ile
545 550 555 560

Thr Asp Glu Glu Glu Ile Lys Ala Thr Asn Pro Val Ala Thr Glu Glu
565 570 575

Tyr Gly Ala Val Ala Ile Asn Asn Gln Ala Ala Asn Thr Leu Ala Gln
580 585 590

Thr Gly Leu Val His Asn Gln Gly Val Ile Pro Gly Met Val Trp Gln
595 600 605

Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His
610 615 620

Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Leu
625 630 635 640

Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
645 650 655

Asp Pro Pro Leu Thr Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile Thr
660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln
675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn
690 695 700

Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Thr Glu Gly Val
705 710 715 720

Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
725 730 735

<210> 52
<211> 736
<212> PRT
<213> Callithrix jacchus

<400> 52

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala

85

90

95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
 100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
 115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Asn Thr Ala Pro Gly Lys Lys Arg
 130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
 145 150 155 160

Lys Thr Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
 165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Arg Glu Pro Pro
 180 185 190

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

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
 210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
 225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
 245 250 255

Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp Asn
 260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
 275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Ser
 290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
 305 310 315 320

Gln Val Lys Glu Val Thr Thr Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Leu Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Val
435 440 445

Arg Thr Gln Thr Thr Gly Thr Gly Gly Thr Gln Thr Leu Ala Phe Ser
450 455 460

Gln Ala Gly Pro Ser Ser Met Ala Asn Gln Ala Arg Asn Trp Val Pro
465 470 475 480

Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Thr Asn Gln Asn
485 490 495

Asn Asn Ser Asn Phe Ala Trp Thr Gly Ala Ala Lys Phe Lys Leu Asn
500 505 510

Gly Arg Asp Ser Leu Met Asn Pro Gly Val Ala Met Ala Ser His Lys
515 520 525

Asp Asp Glu Asp Arg Phe Phe Pro Ser Ser Gly Val Leu Ile Phe Gly
530 535 540

Lys Gln Gly Ala Gly Asn Asp Gly Val Asp Tyr Ser Gln Val Leu Ile

545		550		555		560									
Thr	Asp	Glu	Glu	Glu	Ile	Lys	Ala	Thr	Asn	Pro	Val	Ala	Thr	Glu	Glu
				565					570					575	
Tyr	Gly	Ala	Val	Ala	Ile	Asn	Asn	Gln	Ala	Ala	Asn	Thr	Gln	Ala	Gln
			580					585					590		
Thr	Gly	Leu	Val	His	Asn	Gln	Gly	Val	Ile	Pro	Gly	Met	Val	Trp	Gln
		595					600					605			
Asn	Arg	Asp	Val	Tyr	Leu	Gln	Gly	Pro	Ile	Trp	Ala	Lys	Ile	Pro	His
	610					615					620				
Thr	Asp	Gly	Asn	Phe	His	Pro	Ser	Pro	Leu	Met	Gly	Gly	Phe	Gly	Leu
625					630					635					640
Lys	His	Pro	Pro	Pro	Gln	Ile	Leu	Ile	Lys	Asn	Thr	Pro	Val	Pro	Ala
				645					650					655	
Asp	Pro	Pro	Leu	Thr	Phe	Asn	Gln	Ala	Lys	Leu	Asn	Ser	Phe	Ile	Thr
			660					665					670		
Gln	Tyr	Ser	Thr	Gly	Gln	Val	Ser	Val	Glu	Ile	Glu	Trp	Glu	Leu	Gln
		675					680					685			
Lys	Glu	Asn	Ser	Lys	Arg	Trp	Asn	Pro	Glu	Ile	Gln	Tyr	Thr	Ser	Asn
	690					695					700				
Tyr	Tyr	Lys	Ser	Thr	Asn	Val	Asp	Phe	Ala	Val	Asn	Thr	Glu	Gly	Val
705					710					715					720
Tyr	Ser	Glu	Pro	Arg	Pro	Ile	Gly	Thr	Arg	Tyr	Leu	Thr	Arg	Asn	Leu
				725					730					735	
<210> 53															
<211> 716															
<212> PRT															
<213> Sus scrofa															
<400> 53															
Met	Ser	Phe	Val	Asp	His	Pro	Pro	Asp	Trp	Leu	Glu	Glu	Ile	Gly	Glu
1				5					10					15	

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

Pro Asn Gln Gln Lys Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Asn Tyr Leu Gly Pro Gly Asn Gly Leu Asp Arg Gly Glu Pro Val
50 55 60

Asn Arg Ala Asp Glu Val Ala Arg Glu His Asp Ile Ser Tyr Asn Glu
65 70 75 80

Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
85 90 95

Ala Glu Phe Gln Glu Lys Leu Ala Asp Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro Phe
115 120 125

Gly Leu Val Glu Glu Pro Ala Lys Thr Ala Ala Lys Gly Glu Arg Ile
130 135 140

Asp Asp His Tyr Pro Lys Lys Lys Lys Ala Arg Val Glu Glu Thr Glu
145 150 155 160

Ala Gly Thr Ser Gly Gly Gln Gln Leu Gln Ile Pro Ala Gln Pro Ala
165 170 175

Ser Ser Leu Gly Ala Asp Thr Met Ser Ala Gly Gly Gly Ser Pro Leu
180 185 190

Gly Asp Asn Asn Gln Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asp
195 200 205

Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile Thr Lys Ser
210 215 220

Thr Arg Thr Trp Val Leu Pro Ser Tyr Asn Asn His Leu Tyr Lys Glu
225 230 235 240

Ile His Ser Gly Ser Val Asp Gly Ser Asn Ala Asn Ala Tyr Phe Gly
245 250 255

Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Ser His
260 265 270

Trp Ser Pro Arg Asp Trp Gln Arg Leu Val Asn Asn Tyr Trp Gly Phe
275 280 285

Arg Pro Arg Ser Leu Lys Val Lys Ile Phe Asn Ile Gln Val Lys Glu
290 295 300

Val Thr Val Gln Asp Ala Thr Thr Thr Ile Ala Asn Asn Leu Thr Ser
305 310 315 320

Thr Val Gln Val Phe Thr Asp Asp Asp Tyr Gln Leu Pro Tyr Val Ile
325 330 335

Gly Asn Gly Thr Glu Gly Cys Leu Pro Ala Phe Pro Pro Gln Val Phe
340 345 350

Thr Leu Pro Gln Tyr Gly Tyr Ala Thr Leu Asn Arg Asn Asn Thr Asp
355 360 365

Asp Pro Thr Glu Arg Ser Ser Phe Phe Cys Leu Glu Tyr Phe Pro Ser
370 375 380

Lys Met Leu Arg Thr Gly Asn Ser Phe Glu Phe Thr Tyr Ser Phe Glu
385 390 395 400

Glu Val Pro Phe His Cys Ser Phe Ala Pro Ser Gln Asn Leu Phe Lys
405 410 415

Leu Ala Asn Pro Leu Val Asp Gln Tyr Leu Tyr Arg Phe Val Ser Thr
420 425 430

Asp Thr Ser Gly Asn Ile Gln Phe Gln Lys Asn Leu Lys Ala Arg Tyr
435 440 445

Ala Asn Thr Tyr Lys Asn Trp Phe Pro Gly Pro Met Cys Arg Thr Gln
450 455 460

Gly Trp Tyr Thr Gly Ser Gly Thr Tyr Asn Arg Ser Gly Val Thr Asn
465 470 475 480

Phe Ala Thr Ser Asn Arg Met Asp Leu Glu Gly Ala Ser Tyr Gln Val
485 490 495

Asn Pro Gln Pro Asn Gly Met Thr Asn Thr Leu Gln Asp Ser Asn Lys
500 505 510

Tyr Ala Leu Glu Asn Thr Met Ile Phe Asn Ser Gln Asn Ala Glu Pro
515 520 525

Gly Thr Thr Ser Leu Tyr Gln Glu Asn Asn Leu Leu Ile Thr Ser Glu
530 535 540

Ser Glu Thr Gln Pro Val Asn Arg Val Ala Tyr Asp Thr Gly Gly Gln
545 550 555 560

Met Ala Thr Asn Ala Gln Ser Thr Asn Leu Ala Pro Thr Val Gly Thr
565 570 575

Tyr Asn His Gln Glu Met Leu Pro Gly Ser Val Trp Met Asp Arg Asp
580 585 590

Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro Glu Thr Gly Ala
595 600 605

His Phe His Pro Ser Pro Ala Met Gly Gly Phe Gly Leu Lys His Pro
610 615 620

Pro Pro Met Met Leu Ile Lys Asn Thr Pro Val Pro Ser Asn Val Thr
625 630 635 640

Ala Phe Ser Glu Ile Pro Val Lys Ser Phe Ile Thr Gln Tyr Ser Thr
645 650 655

Gly Gln Val Thr Val Glu Met Glu Trp Glu Leu Lys Lys Glu Asp Ser
660 665 670

Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Asn Asn Tyr Asn Asn Pro
675 680 685

Glu Phe Val Asp Phe Ala Pro Asp Thr Ser Gly Glu Tyr Arg Thr Thr
690 695 700

Arg Ala Ile Gly Thr Arg Tyr Leu Thr Arg Pro Leu
705 710 715

<210> 54
<211> 716
<212> PRT
<213> Sus scrofa

<400> 54

Met Ser Phe Val Asp His Pro Pro Asp Trp Leu Glu Glu Ile Gly Glu
1 5 10 15

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

Pro Asn Gln Gln Lys Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Asn Tyr Leu Gly Pro Gly Asn Gly Leu Asp Arg Gly Glu Pro Val
50 55 60

Asn Arg Ala Asp Glu Val Ala Arg Glu His Asp Ile Ser Tyr Asn Glu
65 70 75 80

Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
85 90 95

Ala Glu Phe Gln Glu Lys Leu Ala Asp Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Ala Leu Glu Pro Phe
115 120 125

Gly Leu Val Glu Glu Pro Ala Lys Thr Ala Ala Lys Gly Glu Arg Ile
130 135 140

Asp Asp His Tyr Pro Lys Lys Lys Lys Ala Arg Val Glu Glu Thr Glu
145 150 155 160

Ala Gly Thr Ser Gly Gly Gln Gln Leu Gln Ile Pro Ala Gln Pro Ala
165 170 175

Ser Ser Leu Gly Ala Asp Thr Met Ser Ala Gly Gly Gly Ser Pro Leu
180 185 190

Gly Asp Asn Asn Gln Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asp

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

Asp Thr Ser Gly Asn Ile Gln Phe Gln Lys Asn Leu Lys Ala Arg Tyr
435 440 445

Ala Asn Thr Tyr Lys Asn Trp Phe Pro Gly Pro Met Cys Arg Thr Gln
450 455 460

Gly Trp Tyr Thr Gly Ser Gly Thr Tyr Asn Arg Ser Gly Val Thr Asn
465 470 475 480

Phe Ala Thr Ser Asn Arg Met Asp Leu Glu Gly Ala Ser Tyr Gln Val
485 490 495

Asn Pro Gln Pro Asn Gly Met Thr Asn Thr Leu Gln Asp Ser Asn Lys
500 505 510

Tyr Ala Leu Glu Asn Thr Met Ile Phe Asn Ser Gln Asn Ala Glu Pro
515 520 525

Gly Thr Thr Ser Leu Tyr Gln Glu Asn Asn Leu Leu Ile Thr Ser Glu
530 535 540

Ser Glu Thr Gln Pro Val Asn Arg Val Ala Tyr Asp Thr Gly Gly Gln
545 550 555 560

Met Ala Thr Asn Ala Gln Ser Thr Asn Leu Ala Pro Thr Val Gly Thr
565 570 575

Tyr Asn His Gln Glu Met Leu Pro Gly Ser Val Trp Met Asp Arg Asp
580 585 590

Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro Glu Thr Gly Ala
595 600 605

His Phe His Pro Ser Pro Ala Met Gly Gly Phe Gly Leu Lys His Pro
610 615 620

Pro Pro Met Met Leu Ile Lys Asn Thr Pro Val Pro Ser Asn Val Thr
625 630 635 640

Ala Phe Ser Glu Ile Pro Val Lys Ser Phe Ile Thr Gln Tyr Ser Thr
645 650 655

Gly Gln Val Thr Val Glu Met Glu Trp Glu Leu Lys Lys Glu Asn Ser

660

665

670

Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Asn Asn Tyr Asn Asn Pro
 675 680 685

Glu Phe Val Asp Phe Ala Pro Asp Thr Ser Gly Glu Tyr Arg Thr Thr
 690 695 700

Arg Ala Ile Gly Thr Arg Tyr Leu Thr Arg Pro Leu
 705 710 715

<210> 55
 <211> 716
 <212> PRT
 <213> Sus scrofa

<400> 55

Met Ser Phe Val Asp His Pro Pro Asp Trp Phe Glu Glu Ile Gly Glu
 1 5 10 15

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

Pro Asn Gln Gln Lys Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
 35 40 45

Tyr Asn Tyr Leu Gly Pro Gly Asn Gly Leu Asp Arg Gly Glu Pro Ala
 50 55 60

Asn Arg Ala Asp Glu Val Ala Arg Glu His Asp Ile Ser Tyr Asn Glu
 65 70 75 80

Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
 85 90 95

Ala Glu Phe Gln Glu Lys Leu Ala Asp Asp Thr Ser Phe Gly Gly Asn
 100 105 110

Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro Phe
 115 120 125

Gly Leu Val Glu Glu Pro Ala Lys Thr Ala Ala Lys Gly Glu Arg Ile
 130 135 140

Asp Asp His Tyr Pro Lys Lys Lys Lys Ala Arg Val Glu Glu Thr Glu
145 150 155 160

Ala Gly Thr Ser Gly Gly Gln Gln Leu Gln Ile Pro Ala Gln Pro Ala
165 170 175

Ser Ser Leu Gly Ala Asp Thr Met Ser Ala Gly Gly Gly Ser Pro Leu
180 185 190

Gly Asp Asn Asn Gln Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asp
195 200 205

Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile Thr Lys Ser
210 215 220

Thr Arg Thr Trp Val Leu Pro Ser Tyr Asn Asn His Leu Tyr Lys Glu
225 230 235 240

Ile His Ser Gly Ser Val Asp Gly Ser Asn Ala Asn Ala Tyr Phe Gly
245 250 255

Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Ser His
260 265 270

Trp Ser Pro Arg Asp Trp Gln Arg Leu Val Asn Asn Tyr Trp Gly Phe
275 280 285

Arg Pro Arg Ser Leu Lys Val Lys Ile Phe Asn Ile Gln Val Lys Glu
290 295 300

Val Thr Val Gln Asp Ala Thr Thr Thr Ile Ala Asn Asn Leu Thr Ser
305 310 315 320

Thr Val Gln Val Phe Thr Asp Asp Asp Tyr Gln Leu Pro Tyr Val Ile
325 330 335

Gly Asn Gly Thr Glu Gly Cys Leu Pro Ala Phe Pro Pro Gln Val Phe
340 345 350

Thr Leu Pro Gln Tyr Gly Tyr Ala Thr Leu Asn Arg Asn Asn Thr Asp
355 360 365

Asp Pro Thr Glu Arg Ser Ser Phe Phe Cys Leu Glu Tyr Phe Pro Ser
370 375 380

Lys Met Leu Arg Thr Gly Asn Ser Phe Glu Phe Thr Tyr Ser Phe Gly
385 390 395 400

Glu Val Pro Leu His Cys Ser Phe Ala Pro Ser Gln Asn Leu Phe Lys
405 410 415

Leu Ala Asn Pro Leu Val Asp Gln His Leu Tyr Arg Phe Val Ser Thr
420 425 430

Asp Thr Ser Gly Asn Ile Gln Phe Gln Lys Asn Leu Lys Ala Arg Tyr
435 440 445

Ala Asn Thr Tyr Lys Asn Trp Phe Pro Gly Pro Met Cys Arg Thr Gln
450 455 460

Gly Trp Tyr Thr Gly Ser Gly Thr Tyr Asn Arg Pro Gly Val Thr Asn
465 470 475 480

Phe Ala Thr Ser Asn Arg Met Asp Leu Glu Gly Ala Ser Tyr Gln Val
485 490 495

Asn Pro Gln Pro Asn Gly Met Thr Asn Thr Leu Gln Asp Ser Asn Lys
500 505 510

Tyr Ala Leu Glu Asn Thr Met Ile Phe Asn Ser Gln Asn Ala Glu Pro
515 520 525

Gly Thr Thr Ser Leu Tyr Gln Glu Asn Asn Leu Leu Ile Thr Ser Glu
530 535 540

Ser Glu Thr Gln Pro Val Asn Arg Val Ala Tyr Asp Thr Gly Gly Gln
545 550 555 560

Met Ala Thr Asn Ala Gln Ser Thr Asn Leu Ala Pro Thr Val Gly Thr
565 570 575

Tyr Asn His Gln Glu Met Leu Pro Gly Ser Val Trp Met Asp Arg Asp
580 585 590

Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro Glu Thr Gly Ala
595 600 605

His Phe His Pro Ser Pro Ala Met Gly Gly Phe Gly Leu Lys His Pro
610 615 620

Pro Pro Met Met Leu Thr Lys Asn Thr Pro Val Pro Ser Asn Val Thr
625 630 635 640

Ala Phe Ser Glu Ile Pro Val Lys Ser Phe Ile Thr Gln Tyr Ser Thr
645 650 655

Gly Gln Val Thr Val Glu Met Glu Trp Glu Leu Lys Lys Glu Asn Ser
660 665 670

Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Asn Asn Tyr Asn Asn Pro
675 680 685

Glu Phe Val Asp Phe Ala Pro Asp Thr Ser Gly Glu Tyr Arg Thr Thr
690 695 700

Arg Ala Ile Gly Thr Arg Tyr Leu Thr Arg Pro Leu
705 710 715

<210> 56
<211> 716
<212> PRT
<213> Sus scrofa

<400> 56

Met Ser Phe Val Asp His Pro Pro Asp Trp Leu Glu Glu Ile Gly Glu
1 5 10 15

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

Pro Asn Gln Gln Lys Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Asn Tyr Leu Gly Pro Gly Asn Gly Leu Asp Arg Gly Glu Pro Val
50 55 60

Asn Arg Ala Asp Glu Val Ala Arg Glu His Asp Ile Ser Tyr Asn Glu
65 70 75 80

Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
85 90 95

Ala Glu Phe Gln Glu Lys Leu Ala Asp Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro Phe
115 120 125

Gly Leu Val Glu Glu Pro Ala Lys Thr Ala Ala Lys Gly Glu Arg Ile
130 135 140

Asp Asp His Tyr Pro Lys Lys Lys Lys Ala Arg Val Glu Glu Thr Glu
145 150 155 160

Ala Gly Thr Ser Gly Gly Gln Gln Leu Gln Ile Pro Ala Gln Pro Ala
165 170 175

Ser Ser Leu Gly Ala Asp Thr Met Ser Ala Gly Gly Gly Ser Pro Leu
180 185 190

Gly Asp Asn Asn Gln Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asp
195 200 205

Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile Thr Lys Ser
210 215 220

Thr Arg Thr Trp Val Leu Pro Ser Tyr Asn Asn His Leu Tyr Lys Glu
225 230 235 240

Ile His Ser Gly Ser Val Asp Gly Ser Asn Ala Asn Ala Tyr Phe Gly
245 250 255

Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Ser His
260 265 270

Trp Ser Pro Arg Asp Trp Gln Arg Leu Val Asn Asn Tyr Trp Gly Phe
275 280 285

Arg Pro Arg Ser Leu Lys Val Lys Ile Phe Asn Ile Gln Val Lys Glu
290 295 300

Val Thr Val Gln Asp Ala Thr Thr Thr Ile Ala Asn Asn Leu Thr Ser
305 310 315 320

Thr Val Gln Val Phe Thr Asp Asp Asp Tyr Gln Leu Pro Tyr Val Ile

325

330

335

Gly Asn Gly Thr Glu Gly Cys Leu Pro Ala Phe Pro Pro Gln Val Phe
 340 345 350

Thr Leu Pro Gln Tyr Gly Tyr Ala Thr Leu Asn Arg Asn Asn Thr Asp
 355 360 365

Asp Pro Thr Glu Arg Ser Ser Phe Phe Cys Leu Glu Tyr Phe Pro Ser
 370 375 380

Lys Met Leu Arg Thr Gly Asn Ser Phe Glu Phe Thr Tyr Ser Phe Glu
 385 390 395 400

Glu Val Pro Phe His Cys Ser Phe Ala Pro Ser Gln Asn Leu Phe Lys
 405 410 415

Leu Ala Asn Pro Leu Val Asp Gln Tyr Leu Tyr Arg Phe Val Ser Thr
 420 425 430

Asp Thr Ser Gly Asn Ile Gln Phe Gln Lys Asn Leu Lys Ala Arg Tyr
 435 440 445

Ala Asn Thr Tyr Lys Asn Trp Phe Pro Gly Pro Met Cys Arg Thr Gln
 450 455 460

Gly Trp Tyr Thr Gly Ser Gly Thr Tyr Asn Arg Ser Gly Val Thr Asn
 465 470 475 480

Phe Ala Thr Ser Asn Arg Met Asp Leu Glu Gly Ala Ser Tyr Gln Val
 485 490 495

Asn Pro Gln Pro Asn Gly Met Thr Asn Thr Leu Gln Asp Ser Asn Lys
 500 505 510

Tyr Ala Leu Glu Asn Thr Met Ile Phe Asn Ser Gln Asn Ala Glu Pro
 515 520 525

Gly Thr Thr Ser Leu Tyr Gln Glu Asn Asn Leu Leu Ile Thr Ser Glu
 530 535 540

Ser Glu Thr Gln Pro Val Asn Arg Val Ala Tyr Asp Thr Gly Gly Gln
 545 550 555 560

Met Ala Thr Asn Ala Gln Ser Thr Asn Leu Ala Pro Thr Val Gly Thr
565 570 575

Tyr Asn His Gln Glu Met Leu Pro Gly Ser Val Trp Met Asp Arg Asp
580 585 590

Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro Glu Thr Gly Ala
595 600 605

His Phe His Pro Ser Pro Ala Met Gly Gly Phe Gly Leu Lys His Pro
610 615 620

Pro Pro Met Met Leu Ile Lys Asn Thr Pro Val Pro Ser Asn Val Thr
625 630 635 640

Ala Phe Ser Glu Ile Pro Val Lys Ser Phe Ile Thr Gln Tyr Ser Thr
645 650 655

Gly Gln Val Thr Val Glu Met Glu Trp Glu Leu Lys Lys Glu Asn Ser
660 665 670

Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Asn Asn Tyr Asn Asn Pro
675 680 685

Glu Phe Val Asp Phe Ala Pro Asp Thr Ser Gly Glu Tyr Arg Thr Thr
690 695 700

Arg Ala Ile Gly Thr Arg Tyr Leu Thr Arg Pro Leu
705 710 715

<210> 57
<211> 716
<212> PRT
<213> Sus scrofa

<400> 57

Met Ser Phe Val Asp His Pro Pro Asp Trp Leu Glu Glu Ile Gly Glu
1 5 10 15

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

Pro Asn Gln Gln Lys Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Asn Tyr Leu Gly Pro Gly Asn Gly Leu Asp Arg Gly Glu Pro Val
50 55 60

Asn Arg Ala Asp Glu Val Ala Arg Glu His Gly Ile Ser Tyr Asn Glu
65 70 75 80

Gln Leu Gln Ala Gly Asp Asp Pro Tyr Leu Lys Tyr Asn His Ala Asp
85 90 95

Ala Glu Phe Gln Glu Lys Leu Ala Asp Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro Phe
115 120 125

Gly Leu Val Glu Glu Pro Ala Lys Thr Ala Ala Lys Gly Glu Arg Ile
130 135 140

Asp Asp His Tyr Pro Lys Lys Lys Lys Ala Arg Val Glu Glu Thr Glu
145 150 155 160

Ala Gly Thr Gly Gly Gly Gln Gln Leu Gln Ile Pro Ala Gln Pro Ala
165 170 175

Ser Ser Leu Gly Ala Asp Thr Met Ser Ala Gly Gly Gly Ser Pro Leu
180 185 190

Gly Asp Asn Asn Gln Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asp
195 200 205

Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile Thr Lys Ser
210 215 220

Thr Arg Thr Trp Val Leu Pro Ser Tyr Asn Asn His Leu Tyr Lys Glu
225 230 235 240

Ile His Ser Gly Ser Val Asp Gly Ser Asn Ala Asn Ala Tyr Phe Gly
245 250 255

Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Ser His
260 265 270

Trp Ser Pro Arg Asp Trp Gln Arg Leu Val Asn Asn Tyr Trp Gly Phe
275 280 285

Arg Pro Arg Ser Leu Lys Val Lys Ile Phe Asn Ile Gln Val Lys Glu
290 295 300

Val Thr Val Gln Asp Ala Thr Thr Thr Ile Ala Asn Asn Leu Thr Ser
305 310 315 320

Thr Val Gln Val Phe Thr Asp Asp Asp Tyr Gln Leu Pro Tyr Val Ile
325 330 335

Gly Asn Gly Thr Glu Gly Cys Leu Pro Ala Phe Pro Pro Gln Val Phe
340 345 350

Thr Leu Pro Gln Tyr Gly Tyr Ala Thr Leu Asn Arg Asn Asn Thr Asp
355 360 365

Asp Pro Thr Glu Arg Ser Ser Phe Phe Cys Leu Glu Tyr Phe Pro Ser
370 375 380

Lys Met Leu Arg Thr Gly Asn Ser Leu Glu Phe Thr Tyr Ser Phe Glu
385 390 395 400

Glu Val Pro Phe His Cys Ser Phe Ala Pro Ser Gln Asn Leu Phe Lys
405 410 415

Leu Ala Asn Pro Leu Val Asp Gln Tyr Leu Tyr Arg Phe Val Ser Thr
420 425 430

Asp Thr Ser Gly Asn Ile Gln Phe Gln Lys Asn Leu Lys Ala Arg Tyr
435 440 445

Ala Asn Thr Tyr Lys Asn Trp Phe Pro Gly Pro Met Cys Arg Thr Gln
450 455 460

Gly Trp Tyr Thr Gly Ser Gly Thr Tyr Asn Arg Ser Gly Val Thr Asn
465 470 475 480

Phe Ala Thr Ser Asn Arg Met Asp Leu Glu Gly Ala Ser Tyr Gln Val
485 490 495

Asn Pro Gln Pro Asn Gly Met Thr Asn Thr Leu Gln Asp Ser Asn Lys
500 505 510

Tyr Ala Leu Glu Asn Thr Met Ile Phe Asn Ser Gln Asn Ala Glu Pro
515 520 525

Gly Thr Thr Ser Leu Tyr Gln Glu Asn Asn Leu Leu Ile Thr Ser Glu
530 535 540

Ser Glu Thr Gln Pro Val Asn Arg Val Ala Tyr Asp Thr Gly Gly Gln
545 550 555 560

Met Ala Thr Asn Ala Gln Ser Thr Asn Leu Ala Pro Thr Val Gly Thr
565 570 575

Tyr Asn His Gln Glu Met Leu Pro Gly Ser Val Trp Met Asp Arg Asp
580 585 590

Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro Glu Thr Gly Ala
595 600 605

His Phe His Pro Ser Pro Ala Met Gly Gly Phe Gly Leu Lys His Pro
610 615 620

Pro Pro Met Met Leu Ile Lys Asn Thr Pro Val Pro Ser Asn Val Thr
625 630 635 640

Ala Phe Ser Glu Ile Pro Val Lys Ser Phe Ile Thr Gln Tyr Ser Thr
645 650 655

Gly Gln Val Thr Val Glu Met Glu Trp Glu Leu Lys Lys Glu Asn Ser
660 665 670

Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Asn Asn Tyr Asn Asn Pro
675 680 685

Glu Phe Val Asp Phe Ala Pro Asp Thr Ser Gly Glu Tyr Arg Thr Thr
690 695 700

Arg Ala Ile Gly Thr Arg Tyr Leu Thr Arg Pro Leu
705 710 715

<210> 58
<211> 716
<212> PRT
<213> Sus scrofa

<400> 58

Met Ser Phe Val Asp His Pro Pro Asp Trp Leu Glu Glu Ile Gly Glu
1 5 10 15

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

Pro Asn Gln Gln Lys Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Asn Tyr Leu Gly Pro Gly Asn Gly Leu Gly Arg Gly Glu Pro Val
50 55 60

Asn Arg Ala Asp Glu Val Ala Arg Glu His Asp Ile Ser Tyr Asn Glu
65 70 75 80

Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
85 90 95

Ala Glu Phe Gln Glu Lys Leu Ala Asp Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro Phe
115 120 125

Gly Leu Val Glu Glu Pro Ala Lys Thr Ala Ala Lys Gly Glu Arg Ile
130 135 140

Asp Asp His Tyr Pro Lys Lys Lys Lys Ala Arg Val Glu Glu Thr Glu
145 150 155 160

Ala Gly Thr Ser Gly Gly Gln Gln Leu Gln Ile Pro Ala Gln Pro Ala
165 170 175

Ser Ser Leu Gly Ala Asp Thr Met Ser Ala Gly Gly Gly Ser Pro Leu
180 185 190

Gly Asp Asn Asn Gln Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asp
195 200 205

Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile Thr Lys Ser
210 215 220

Thr Arg Thr Trp Val Leu Pro Ser Tyr Asn Asn His Leu Tyr Lys Glu
225 230 235 240

Ile His Ser Gly Ser Val Asp Gly Ser Asn Ala Asn Ala Tyr Phe Gly
245 250 255

Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Ser His
260 265 270

Trp Ser Pro Arg Asp Trp Gln Arg Leu Val Asn Asn Tyr Trp Gly Phe
275 280 285

Arg Pro Arg Ser Leu Lys Val Lys Ile Phe Asn Ile Gln Val Lys Glu
290 295 300

Val Thr Val Gln Asp Ala Thr Thr Thr Ile Ala Asn Asn Leu Thr Ser
305 310 315 320

Thr Val Gln Val Phe Thr Asp Asp Asp Tyr Gln Leu Pro Tyr Val Ile
325 330 335

Gly Asn Gly Thr Glu Gly Cys Leu Pro Ala Phe Pro Pro Gln Val Phe
340 345 350

Thr Leu Pro Gln Tyr Gly Tyr Ala Thr Leu Asn Arg Asn Asn Thr Asp
355 360 365

Asp Pro Thr Glu Arg Ser Ser Phe Phe Cys Leu Glu Tyr Phe Pro Ser
370 375 380

Lys Met Leu Arg Thr Gly Asn Ser Phe Glu Phe Thr Tyr Ser Phe Glu
385 390 395 400

Glu Val Pro Phe His Cys Ser Phe Ala Pro Ser Gln Asn Leu Phe Lys
405 410 415

Leu Ala Asn Pro Leu Val Asp Gln Tyr Leu Tyr Arg Phe Val Ser Thr
420 425 430

Asp Thr Ser Gly Asn Ile Gln Phe Gln Lys Asn Leu Lys Ala Arg Tyr
435 440 445

Ala Asn Thr Tyr Lys Asn Trp Phe Pro Gly Pro Met Cys Arg Thr Gln

450		455		460
Gly 465	Trp	Tyr	Thr	Gly 470
	Ser	Gly	Thr	Tyr
	Asn 475	Arg	Ser	Gly
	Val	Thr	Asn	480
Phe	Ala	Thr	Ser	Asn 485
	Arg	Met	Asp	Leu
	Glu	Gly	Ala	Ser
	Tyr	Gln	Ala	495
Asn	Pro	Gln	Pro	Asn 500
	Gly	Met	Thr	Asn 505
	Thr	Leu	Gln	Asp
	Ser	Asn	Lys	510
Tyr	Ala	Leu	Glu	Asn 515
	Thr	Met	Ile	Phe
	Asn	Ser	Gln	Asn 525
	Ala	Glu	Pro	
Gly	Thr	Thr	Ser	Leu
530		Tyr	Gln	Glu
		Asn	Asn	Leu
		Leu	Ile	Thr
		Ser	Glu	
Ser	Glu	Thr	Gln	Pro
545		Val	Asn	Arg
		Val	Ala	Tyr
		Asp	Thr	Gly
		Gly	Gln	560
Met	Ala	Thr	Asn	Ala
		Gln	Ser	Thr
		Asn	Leu	Ala
		Pro	Thr	Val
		Gly	Thr	575
Tyr	Asn	His	Gln	Glu
		Met	Leu	Pro
		Gly	Ser	Val
		Trp	Met	Asp
		Arg	Asp	590
Val	Tyr	Leu	Gln	Gly
		Pro	Ile	Trp
		Ala	Lys	Ile
		Pro	Glu	Thr
		Gly	Ala	605
His	Phe	His	Pro	Ser
		Pro	Ala	Met
		Gly	Gly	Phe
		Gly	Leu	Lys
		His	Pro	
Pro	Pro	Met	Met	Leu
625		Ile	Lys	Asn
		Thr	Pro	Val
		Pro	Ser	Asn
		Val	Thr	640
Ala	Phe	Ser	Glu	Ile
		Pro	Val	Lys
		Ser	Leu	Ile
		Thr	Gln	Tyr
		Ser	Thr	655
Gly	Gln	Val	Thr	Val
		Glu	Met	Glu
		Trp	Glu	Leu
		Lys	Lys	Glu
		Asn	Ser	670
Lys	Arg	Trp	Asn	Pro
		Glu	Ile	Gln
		Tyr	Thr	Asn
		Asn	Tyr	Asn
		Asn	Pro	685

Glu Phe Val Asp Phe Ala Pro Asp Thr Ser Gly Glu Tyr Arg Thr Thr
690 695 700

Arg Ala Ile Gly Thr Arg Tyr Leu Thr Arg Pro Leu
705 710 715

<210> 59
<211> 716
<212> PRT
<213> Sus scrofa

<400> 59

Met Ser Phe Val Asp His Pro Pro Asp Trp Leu Glu Glu Ile Gly Glu
1 5 10 15

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

Pro Asn Gln Gln Lys Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Asn Tyr Leu Gly Pro Gly Asn Gly Leu Asp Arg Gly Glu Pro Val
50 55 60

Asn Arg Ala Asp Glu Val Ala Arg Glu His Asp Ile Ser Tyr Asn Glu
65 70 75 80

Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
85 90 95

Ala Glu Phe Gln Glu Lys Leu Ala Asp Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro Phe
115 120 125

Gly Leu Val Glu Glu Pro Ala Lys Thr Ala Ala Lys Gly Glu Arg Ile
130 135 140

Asp Asp His Tyr Pro Lys Lys Lys Lys Ala Arg Val Glu Glu Thr Glu
145 150 155 160

Ala Gly Thr Ser Gly Gly Gln Gln Leu Gln Ile Pro Ala Gln Pro Ala
165 170 175

Ser Ser Leu Gly Ala Asp Thr Met Ser Ala Gly Gly Gly Ser Pro Leu
180 185 190

Gly Asp Asn Asn Gln Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asp
195 200 205

Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile Thr Lys Ser
210 215 220

Thr Arg Thr Trp Val Leu Pro Ser Tyr Asn Asn His Leu Tyr Lys Glu
225 230 235 240

Ile His Ser Gly Ser Val Asp Gly Ser Asn Ala Asn Ala Tyr Phe Gly
245 250 255

Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Ser His
260 265 270

Trp Ser Pro Arg Asp Trp Gln Arg Leu Val Asn Asn Tyr Trp Gly Phe
275 280 285

Arg Pro Arg Ser Leu Lys Val Lys Ile Phe Asn Ile Gln Val Lys Glu
290 295 300

Val Thr Val Gln Asp Ala Thr Thr Thr Ile Ala Asn Asn Leu Ala Ser
305 310 315 320

Thr Val Gln Val Phe Thr Asp Asp Asp Tyr Gln Leu Pro Tyr Val Ile
325 330 335

Gly Asn Gly Thr Glu Gly Cys Leu Pro Ala Phe Pro Pro Gln Val Phe
340 345 350

Thr Leu Pro Gln Tyr Gly Tyr Ala Thr Leu Asn Arg Asn Asn Thr Asp
355 360 365

Asp Pro Thr Glu Arg Ser Ser Phe Phe Cys Leu Glu Tyr Phe Pro Ser
370 375 380

Lys Met Leu Arg Thr Gly Asn Ser Phe Glu Phe Thr Tyr Ser Phe Glu
385 390 395 400

Glu Val Pro Phe His Cys Ser Phe Ala Pro Ser Gln Asn Leu Phe Lys
405 410 415

Leu Ala Asn Pro Leu Val Asp Gln Tyr Leu Tyr Arg Phe Val Ser Thr
420 425 430

Asp Thr Ser Gly Asn Ile Gln Phe Gln Lys Asn Leu Lys Ala Arg Tyr
435 440 445

Ala Asn Thr Tyr Lys Asn Trp Phe Pro Gly Pro Met Cys Arg Thr Gln
450 455 460

Gly Trp Tyr Thr Gly Ser Gly Thr Tyr Asn Arg Ser Gly Val Thr Asn
465 470 475 480

Phe Ala Thr Ser Asn Arg Met Asp Leu Glu Gly Ala Ser Tyr Gln Val
485 490 495

Asn Pro Gln Pro Asn Gly Met Thr Asn Thr Leu Gln Asp Ser Asn Lys
500 505 510

Tyr Ala Leu Glu Asn Thr Met Ile Phe Asn Ser Gln Asn Ala Glu Pro
515 520 525

Gly Thr Thr Ser Leu Tyr Gln Glu Asn Asn Leu Leu Ile Thr Ser Glu
530 535 540

Ser Glu Thr Gln Pro Val Asn Arg Val Ala Tyr Asp Thr Gly Gly Gln
545 550 555 560

Met Ala Thr Asn Ala Gln Ser Thr Asn Leu Ala Pro Thr Val Gly Thr
565 570 575

Tyr Asn His Gln Glu Met Leu Pro Gly Ser Val Trp Met Asp Arg Asp
580 585 590

Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro Glu Thr Gly Ala
595 600 605

His Phe His Pro Ser Pro Ala Met Gly Gly Phe Gly Leu Lys His Pro
610 615 620

Pro Pro Met Met Leu Ile Lys Asn Thr Pro Val Pro Ser Asn Val Thr
625 630 635 640

Ala Phe Ser Glu Ile Pro Val Lys Ser Phe Ile Thr Gln Tyr Ser Thr
645 650 655

Gly Gln Val Thr Val Glu Met Glu Trp Glu Leu Lys Lys Glu Asn Ser
660 665 670

Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Asn Asn Tyr Asn Asn Pro
675 680 685

Glu Phe Val Asp Phe Ala Pro Asp Thr Ser Gly Glu Tyr Arg Thr Thr
690 695 700

Arg Ala Ile Gly Thr Arg Tyr Leu Thr Arg Pro Leu
705 710 715

<210> 60
<211> 716
<212> PRT
<213> Sus scrofa

<400> 60

Met Ser Phe Val Asp His Pro Pro Asp Trp Leu Glu Glu Ile Gly Glu
1 5 10 15

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

Pro Asn Gln Gln Lys Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Asn Tyr Leu Gly Pro Gly Asn Gly Leu Asp Arg Gly Glu Pro Val
50 55 60

Asn Arg Ala Asp Glu Val Ala Arg Glu His Asp Ile Ser Tyr Asn Glu
65 70 75 80

Gln Leu Gln Ala Gly Asp Asp Pro Tyr Leu Lys Tyr Asn His Ala Asp
85 90 95

Ala Glu Phe Gln Glu Lys Leu Ala Asp Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro Phe

115																
Gly	Leu	Val	Glu	Glu	Pro	Ala	Lys	Thr	Ala	Ala	Lys	Gly	Glu	Arg	Ile	
130						135					140					
Asp	Asp	His	Tyr	Pro	Lys	Lys	Lys	Lys	Ala	Arg	Val	Glu	Glu	Thr	Glu	
145					150					155					160	
Ala	Gly	Thr	Ser	Gly	Gly	Gln	Gln	Leu	Gln	Ile	Pro	Ala	Gln	Pro	Ala	
				165					170					175		
Ser	Ser	Leu	Gly	Ala	Asp	Thr	Met	Ser	Ala	Gly	Gly	Gly	Ser	Pro	Leu	
			180					185					190			
Gly	Asp	Asn	Asn	Gln	Gly	Ala	Asp	Gly	Val	Gly	Asn	Ala	Ser	Gly	Asp	
		195					200					205				
Trp	His	Cys	Asp	Ser	Thr	Trp	Met	Gly	Asp	Arg	Val	Ile	Thr	Lys	Ser	
210						215					220					
Thr	Arg	Thr	Trp	Val	Leu	Pro	Ser	Tyr	Asn	Asn	His	Leu	Tyr	Lys	Glu	
225					230					235					240	
Ile	His	Ser	Gly	Ser	Val	Asp	Gly	Ser	Asn	Ala	Asn	Ala	Tyr	Phe	Gly	
				245					250					255		
Tyr	Ser	Thr	Pro	Trp	Gly	Tyr	Phe	Asp	Phe	Asn	Arg	Phe	His	Ser	His	
			260					265					270			
Trp	Ser	Pro	Arg	Asp	Trp	Gln	Arg	Leu	Val	Asn	Asn	Tyr	Trp	Gly	Phe	
		275					280					285				
Arg	Pro	Arg	Ser	Leu	Lys	Val	Lys	Ile	Phe	Asn	Ile	Gln	Val	Lys	Glu	
	290					295					300					
Val	Thr	Val	Gln	Asp	Ala	Thr	Thr	Thr	Ile	Ala	Asn	Asn	Leu	Thr	Ser	
305					310					315					320	
Thr	Val	Gln	Val	Phe	Thr	Asp	Asp	Asp	Tyr	Gln	Leu	Pro	Tyr	Val	Ile	
				325					330					335		
Gly	Asn	Gly	Thr	Glu	Gly	Cys	Leu	Pro	Ala	Phe	Pro	Pro	Gln	Val	Phe	
			340					345					350			

Thr Leu Pro Gln Tyr Gly Tyr Ala Thr Leu Asn Arg Asn Asn Thr Asp
355 360 365

Asp Pro Thr Glu Arg Ser Ser Phe Phe Cys Leu Glu Tyr Phe Pro Ser
370 375 380

Lys Met Leu Arg Thr Gly Asn Ser Phe Glu Phe Thr Tyr Ser Phe Glu
385 390 395 400

Glu Val Pro Phe His Cys Ser Phe Ala Pro Ser Gln Asn Leu Phe Lys
405 410 415

Leu Ala Asn Pro Leu Val Asp Gln Tyr Leu Tyr Arg Phe Val Ser Thr
420 425 430

Asp Thr Ser Gly Asn Ile Gln Phe Gln Lys Asn Leu Lys Ala Arg Tyr
435 440 445

Ala Asn Thr Tyr Lys Asn Trp Phe Pro Gly Pro Met Arg Arg Thr Gln
450 455 460

Gly Trp Tyr Thr Gly Ser Gly Thr Tyr Asn Arg Ser Gly Val Thr Asn
465 470 475 480

Phe Ala Thr Ser Asn Arg Met Asp Leu Glu Gly Ala Ser Tyr Gln Val
485 490 495

Asn Pro Gln Pro Asn Gly Met Thr Asn Thr Leu Gln Asp Ser Asn Lys
500 505 510

Tyr Ala Leu Glu Asn Thr Met Ile Phe Asn Ser Gln Asn Ala Glu Pro
515 520 525

Gly Thr Thr Ser Leu Tyr Gln Glu Asn Asn Leu Leu Ile Thr Ser Glu
530 535 540

Ser Glu Thr Gln Pro Val Asn Arg Val Ala Tyr Asp Thr Gly Gly Gln
545 550 555 560

Met Ala Thr Asn Ala Gln Ser Thr Asn Leu Ala Pro Thr Val Gly Thr
565 570 575

Tyr Asn His Gln Glu Met Leu Pro Gly Ser Val Trp Met Asp Arg Asp

580

585

590

Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro Glu Thr Gly Ala
595 600 605

His Phe His Pro Ser Pro Ala Met Gly Gly Phe Gly Leu Lys His Pro
610 615 620

Pro Pro Met Met Leu Ile Lys Asn Thr Pro Val Pro Ser Asn Val Thr
625 630 635 640

Ala Phe Ser Glu Ile Pro Val Lys Ser Phe Ile Thr Gln Tyr Ser Thr
645 650 655

Gly Gln Val Thr Val Glu Met Glu Trp Glu Leu Lys Lys Glu Asn Ser
660 665 670

Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Asn Asn Tyr Asn Asn Pro
675 680 685

Glu Phe Val Asp Phe Ala Pro Asp Thr Ser Gly Glu Tyr Arg Thr Thr
690 695 700

Arg Ala Ile Gly Thr Arg Tyr Leu Thr Arg Pro Leu
705 710 715

<210> 61
<211> 716
<212> PRT
<213> Sus scrofa

<400> 61

Met Ser Phe Val Asp His Pro Pro Asp Trp Leu Glu Glu Ile Gly Glu
1 5 10 15

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

Pro Asn Gln Gln Lys Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Asn Tyr Leu Gly Pro Gly Asn Gly Leu Asp Arg Gly Glu Pro Val
50 55 60

Asn Arg Ala Asp Glu Val Ala Arg Glu His Asp Ile Ser Tyr Asn Glu
65 70 75 80

Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
85 90 95

Ala Glu Phe Gln Glu Lys Leu Ala Asp Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro Phe
115 120 125

Gly Leu Val Glu Glu Pro Ala Lys Thr Ala Ala Lys Gly Glu Arg Ile
130 135 140

Asp Asp His Tyr Pro Lys Lys Lys Lys Ala Arg Val Glu Glu Thr Glu
145 150 155 160

Ala Gly Thr Ser Gly Gly Gln Gln Leu Gln Ile Pro Ala Gln Pro Ala
165 170 175

Ser Ser Leu Gly Ala Asp Thr Met Ser Ala Gly Gly Gly Ser Pro Leu
180 185 190

Gly Asp Asn Asn Gln Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asp
195 200 205

Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile Thr Lys Ser
210 215 220

Thr Arg Thr Trp Val Leu Pro Ser Tyr Asn Asn His Leu Tyr Lys Glu
225 230 235 240

Ile His Ser Gly Ser Val Asp Gly Ser Asn Ala Asn Ala Tyr Phe Gly
245 250 255

Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Ser His
260 265 270

Trp Gly Pro Arg Asp Trp Gln Arg Leu Val Asn Asn Tyr Trp Gly Phe
275 280 285

Arg Pro Arg Ser Leu Lys Val Lys Ile Phe Asn Ile Gln Val Lys Glu
290 295 300

Val Thr Val Gln Asp Ala Thr Thr Thr Ile Ala Asn Asn Leu Thr Ser
305 310 315 320

Thr Val Gln Val Phe Thr Asp Asp Asp Tyr Gln Leu Pro Tyr Val Ile
325 330 335

Gly Asn Gly Thr Glu Gly Cys Leu Pro Ala Phe Pro Pro Gln Val Phe
340 345 350

Thr Leu Pro Gln Tyr Gly Tyr Ala Thr Leu Asn Arg Asn Asn Thr Asp
355 360 365

Asp Pro Thr Glu Arg Ser Ser Phe Phe Cys Leu Glu Tyr Phe Pro Ser
370 375 380

Lys Met Leu Arg Thr Gly Asn Ser Phe Glu Phe Thr Tyr Ser Phe Glu
385 390 395 400

Gly Val Pro Phe His Cys Ser Phe Ala Pro Ser Gln Asn Leu Phe Lys
405 410 415

Leu Ala Asn Pro Leu Val Asp Gln Tyr Leu Tyr Arg Phe Val Ser Thr
420 425 430

Asp Thr Ser Gly Asn Ile Gln Phe Gln Lys Asn Leu Lys Ala Arg Tyr
435 440 445

Ala Asn Thr Tyr Lys Asn Trp Phe Pro Gly Pro Met Cys Arg Thr Gln
450 455 460

Gly Trp Tyr Thr Gly Ser Gly Thr Tyr Asn Arg Ser Gly Val Thr Asn
465 470 475 480

Phe Ala Thr Ser Asn Arg Met Asp Leu Glu Gly Ala Ser Tyr Gln Val
485 490 495

Asn Pro Gln Pro Asn Gly Met Thr Asn Thr Leu Gln Asp Ser Asn Lys
500 505 510

Tyr Ala Leu Glu Asn Thr Met Ile Phe Asn Ser Gln Asn Ala Glu Pro
515 520 525

Gly Thr Thr Ser Leu Tyr Gln Glu Asn Asn Leu Leu Ile Thr Ser Glu
530 535 540

Ser Glu Thr Gln Pro Val Asn Arg Val Ala Tyr Asp Thr Gly Gly Gln
545 550 555 560

Met Ala Thr Asn Ala Gln Ser Thr Asn Leu Ala Pro Thr Val Gly Thr
565 570 575

Tyr Asn His Gln Glu Met Leu Pro Gly Ser Val Trp Met Asp Arg Asp
580 585 590

Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro Glu Thr Gly Ala
595 600 605

His Phe His Pro Ser Pro Ala Met Gly Gly Phe Gly Leu Lys His Pro
610 615 620

Pro Pro Met Met Leu Ile Lys Asn Thr Pro Val Pro Ser Asn Val Thr
625 630 635 640

Ala Phe Ser Glu Ile Pro Val Lys Ser Phe Ile Thr Gln Tyr Ser Thr
645 650 655

Gly Gln Val Thr Val Glu Met Glu Trp Glu Leu Lys Lys Glu Asn Ser
660 665 670

Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Asn Asn Tyr Asn Asn Pro
675 680 685

Glu Phe Val Asp Phe Ala Pro Asp Thr Ser Gly Glu Tyr Arg Thr Thr
690 695 700

Arg Ala Ile Gly Thr Arg Tyr Leu Thr Arg Pro Leu
705 710 715

<210> 62
<211> 716
<212> PRT
<213> Sus scrofa

<400> 62

Met Ser Phe Val Asp His Pro Pro Asp Trp Leu Glu Glu Ile Gly Glu
1 5 10 15

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

Pro Asn Gln Gln Lys Arg Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Asn Tyr Leu Gly Pro Gly Asn Gly Leu Asp Arg Gly Glu Pro Val
50 55 60

Asn Arg Val Asp Glu Val Ala Arg Glu Arg Asp Ile Ser Tyr Asn Glu
65 70 75 80

Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
85 90 95

Ala Glu Phe Gln Glu Lys Leu Ala Asp Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro Phe
115 120 125

Gly Leu Val Glu Glu Pro Ala Lys Thr Ala Ala Lys Gly Glu Arg Ile
130 135 140

Asp Asp His Tyr Pro Lys Lys Lys Lys Ala Arg Val Glu Glu Thr Glu
145 150 155 160

Ala Gly Thr Ser Gly Gly Gln Gln Leu Gln Ile Pro Ala Gln Pro Ala
165 170 175

Ser Ser Leu Gly Ala Asp Thr Met Ser Ala Gly Gly Gly Ser Pro Leu
180 185 190

Gly Asp Asn Asn Gln Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asp
195 200 205

Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile Thr Lys Ser
210 215 220

Thr Arg Thr Trp Val Leu Pro Ser Tyr Asn Asn His Leu Tyr Lys Glu
225 230 235 240

Ile His Ser Gly Ser Val Asp Gly Ser Asn Ala Asn Ala Tyr Phe Gly

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

Phe Ala Thr Ser Asn Arg Met Asp Leu Glu Gly Ala Ser Tyr Gln Val
485 490 495

Asn Pro Gln Pro Asn Gly Met Thr Asn Thr Leu Gln Asp Ser Asn Lys
500 505 510

Tyr Ala Leu Glu Asn Thr Met Ile Phe Asn Ser Gln Asn Ala Glu Pro
515 520 525

Gly Thr Thr Ser Leu Tyr Gln Glu Asn Asn Leu Leu Ile Thr Ser Glu
530 535 540

Ser Glu Thr Gln Pro Val Asn Arg Val Ala Tyr Asp Thr Gly Gly Gln
545 550 555 560

Met Ala Thr Asn Ala Gln Ser Thr Asn Leu Ala Pro Thr Val Gly Thr
565 570 575

Tyr Asn His Gln Glu Met Leu Pro Gly Ser Val Trp Met Asp Arg Asp
580 585 590

Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro Glu Thr Gly Ala
595 600 605

His Phe His Pro Ser Pro Ala Met Gly Gly Phe Gly Leu Lys His Pro
610 615 620

Pro Pro Met Met Leu Ile Lys Asn Thr Pro Val Pro Ser Asn Val Thr
625 630 635 640

Ala Phe Ser Glu Ile Pro Val Lys Ser Phe Ile Thr Gln Tyr Ser Thr
645 650 655

Gly Gln Val Thr Val Glu Met Glu Trp Glu Leu Lys Lys Glu Asn Ser
660 665 670

Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Asn Asn Tyr Asn Asn Pro
675 680 685

Glu Phe Val Asp Phe Ala Pro Asp Thr Ser Gly Glu Tyr Arg Thr Thr
690 695 700

Arg Ala Ile Gly Thr Arg Tyr Leu Thr Arg Pro Leu

705

710

715

<210> 63
 <211> 716
 <212> PRT
 <213> Sus scrofa

<400> 63

Met Ser Phe Val Asp His Pro Pro Asp Trp Leu Glu Glu Ile Gly Glu
 1 5 10 15

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

Pro Asn Gln Gln Lys Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
 35 40 45

Tyr Asn Tyr Leu Gly Pro Gly Asn Gly Leu Asp Arg Gly Glu Pro Val
 50 55 60

Asn Arg Ala Asp Glu Val Ala Arg Glu His Asp Ile Ser Tyr Asn Glu
 65 70 75 80

Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
 85 90 95

Ala Glu Phe Gln Glu Lys Leu Ala Asp Asp Thr Ser Phe Gly Gly Asn
 100 105 110

Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro Phe
 115 120 125

Gly Leu Val Glu Glu Pro Ala Lys Thr Ala Ala Lys Gly Glu Arg Ile
 130 135 140

Asp Asp His Tyr Pro Lys Lys Lys Lys Ala Arg Val Glu Glu Thr Glu
 145 150 155 160

Ala Gly Thr Ser Gly Gly Gln Gln Leu Gln Ile Pro Ala Gln Pro Ala
 165 170 175

Ser Ser Leu Gly Ala Asp Thr Met Ser Ala Gly Gly Gly Ser Pro Leu
 180 185 190

Gly Asp Asn Asn Gln Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asp
195 200 205

Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile Thr Lys Ser
210 215 220

Thr Arg Thr Trp Val Leu Pro Ser Tyr Asn Asn His Leu Tyr Lys Glu
225 230 235 240

Ile His Ser Gly Ser Val Asp Gly Ser Asn Ala Asn Ala Tyr Phe Gly
245 250 255

Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Ser His
260 265 270

Trp Ser Pro Arg Asp Trp Gln Arg Leu Val Asn Asn Tyr Trp Gly Phe
275 280 285

Arg Pro Arg Ser Leu Lys Val Lys Ile Phe Asn Ile Gln Val Lys Glu
290 295 300

Val Thr Val Gln Asp Ala Thr Thr Thr Ile Ala Asn Asn Leu Thr Ser
305 310 315 320

Thr Val Gln Val Phe Thr Asp Asp Asp Tyr Gln Leu Pro Tyr Val Ile
325 330 335

Gly Asn Gly Thr Glu Gly Cys Leu Pro Ala Phe Pro Pro Gln Val Phe
340 345 350

Thr Leu Pro Gln Tyr Gly Tyr Ala Thr Leu Asn Arg Asn Asn Thr Asp
355 360 365

Asp Pro Thr Glu Arg Ser Ser Phe Phe Cys Leu Glu Tyr Phe Pro Ser
370 375 380

Lys Met Leu Arg Thr Gly Asn Ser Phe Glu Phe Thr Tyr Ser Phe Glu
385 390 395 400

Glu Val Pro Phe His Cys Ser Phe Ala Pro Ser Gln Asn Leu Phe Lys
405 410 415

Leu Ala Asn Pro Leu Val Asp Gln Tyr Leu Tyr Arg Phe Val Ser Thr
420 425 430

Asp Thr Ser Gly Asn Ile Gln Phe Gln Lys Asn Leu Lys Ala Arg Tyr
435 440 445

Ala Asn Thr Tyr Lys Asn Trp Phe Pro Gly Pro Met Cys Arg Thr Gln
450 455 460

Gly Trp Tyr Thr Gly Ser Gly Thr Tyr Asn Arg Ser Gly Val Thr Asn
465 470 475 480

Phe Ala Thr Ser Asn Arg Met Asp Leu Glu Gly Ala Ser Tyr Gln Val
485 490 495

Asn Pro Gln Pro Asn Gly Met Thr Asn Thr Leu Gln Asp Ser Asn Lys
500 505 510

Tyr Ala Leu Glu Asn Thr Met Ile Phe Asn Ser Gln Asn Ala Glu Pro
515 520 525

Gly Thr Thr Ser Leu Tyr Gln Glu Asn Asn Leu Leu Ile Thr Ser Glu
530 535 540

Ser Glu Thr Gln Pro Val Asn Arg Val Ala Tyr Asp Thr Gly Gly Gln
545 550 555 560

Met Ala Thr Asn Ala Gln Ser Thr Asn Leu Ala Pro Thr Val Gly Thr
565 570 575

Tyr Asn His Gln Glu Met Leu Pro Gly Ser Val Trp Met Asp Arg Asp
580 585 590

Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro Glu Thr Gly Ala
595 600 605

His Phe His Pro Ser Pro Ala Met Gly Gly Phe Gly Leu Lys His Pro
610 615 620

Pro Pro Met Met Leu Ile Lys Asn Thr Pro Val Pro Ser Asn Val Thr
625 630 635 640

Ala Phe Ser Glu Ile Pro Val Lys Ser Phe Ile Thr Gln Tyr Ser Thr
645 650 655

Gly Gln Val Thr Val Glu Met Glu Trp Glu Leu Lys Lys Glu Asn Ser
660 665 670

Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Asn Asn Tyr Asn Asn Pro
675 680 685

Glu Phe Val Asp Phe Ala Pro Asp Thr Ser Gly Glu Cys Arg Thr Thr
690 695 700

Arg Ala Ile Gly Thr Arg Tyr Leu Thr Arg Pro Leu
705 710 715

<210> 64
<211> 716
<212> PRT
<213> Sus scrofa

<400> 64

Met Ser Phe Val Asp His Pro Pro Asp Trp Leu Glu Glu Ile Gly Glu
1 5 10 15

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

Pro Asn Gln Gln Lys Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Asn Tyr Leu Gly Pro Gly Asn Gly Leu Asp Arg Gly Glu Pro Val
50 55 60

Asn Arg Ala Asp Glu Val Ala Arg Glu His Asp Ile Ser Tyr Asn Glu
65 70 75 80

Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
85 90 95

Ala Glu Phe Gln Glu Lys Leu Ala Asp Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro Phe
115 120 125

Gly Leu Val Glu Glu Pro Ala Lys Thr Ala Ala Lys Gly Glu Arg Ile
130 135 140

Asp Asp His Tyr Pro Lys Lys Lys Lys Ala Arg Val Glu Glu Thr Glu
145 150 155 160

Ala Gly Thr Ser Gly Gly Gln Gln Leu Gln Ile Pro Ala Gln Pro Ala
165 170 175

Ser Ser Leu Gly Ala Asp Thr Met Ser Ala Gly Gly Gly Ser Pro Leu
180 185 190

Gly Asp Asn Asn Gln Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asp
195 200 205

Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile Thr Lys Ser
210 215 220

Thr Arg Thr Trp Val Leu Pro Ser Tyr Asn Asn His Leu Tyr Lys Glu
225 230 235 240

Ile His Ser Gly Ser Val Asp Gly Ser Asn Ala Asn Ala Tyr Phe Gly
245 250 255

Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Ser His
260 265 270

Trp Ser Pro Arg Asp Trp Gln Arg Leu Val Asp Asn Tyr Trp Gly Phe
275 280 285

Arg Pro Arg Ser Leu Lys Val Lys Ile Phe Asn Ile Gln Val Lys Glu
290 295 300

Val Thr Val Gln Asp Ala Thr Thr Thr Ile Ala Asn Asn Leu Thr Ser
305 310 315 320

Thr Val Gln Val Phe Thr Asp Asp Asp Tyr Gln Leu Pro Tyr Val Ile
325 330 335

Gly Asn Gly Thr Glu Gly Cys Leu Pro Ala Phe Pro Pro Gln Val Phe
340 345 350

Thr Leu Pro Gln Tyr Gly Tyr Ala Thr Leu Asn Arg Asn Asn Thr Asp
355 360 365

Asp Pro Thr Glu Arg Ser Ser Phe Phe Cys Leu Glu Tyr Phe Pro Ser

370		375		380											
Lys 385	Met	Leu	Arg	Thr	Gly 390	Asn	Ser	Phe	Glu	Phe 395	Thr	Tyr	Ser	Phe	Glu 400
Glu	Val	Pro	Phe	His 405	Cys	Ser	Phe	Ala	Pro 410	Ser	Gln	Asn	Leu	Phe 415	Lys
Leu	Ala	Asn	Pro 420	Leu	Val	Asp	Gln	Tyr 425	Leu	Tyr	Arg	Phe	Val 430	Ser	Thr
Asp	Thr	Ser 435	Gly	Asn	Ile	Gln	Phe	Gln 440	Lys	Asn	Leu	Lys 445	Ala	Arg	Tyr
Ala 450	Asn	Thr	Tyr	Lys	Asn	Trp 455	Phe	Pro	Gly	Pro	Met 460	Cys	Arg	Thr	Gln
Gly 465	Trp	Tyr	Thr	Gly	Ser 470	Gly	Thr	Tyr	Asn	Arg 475	Ser	Gly	Val	Thr	Asn 480
Phe	Ala	Thr	Ser	Asn 485	Arg	Met	Asp	Leu	Glu 490	Gly	Ala	Ser	Tyr	Gln 495	Val
Asn	Pro	Gln	Pro 500	Asn	Gly	Met	Thr	Asn 505	Thr	Leu	Gln	Asp	Ser 510	Asn	Lys
Tyr	Ala	Leu 515	Glu	Asn	Thr	Met	Val 520	Phe	Asn	Ser	Gln	Asn 525	Ala	Glu	Pro
Gly 530	Thr	Thr	Ser	Leu	Tyr	Gln 535	Glu	Asn	Asn	Leu	Leu 540	Ile	Thr	Ser	Glu
Ser 545	Glu	Thr	Gln	Pro	Val 550	Asn	Arg	Val	Ala	Tyr 555	Asn	Thr	Gly	Gly	Gln 560
Met	Ala	Thr	Asn 565	Ala	Gln	Ser	Thr	Asn 570	Leu	Ala	Pro	Thr	Val	Gly 575	Thr
Tyr	Asn	His 580	Gln	Glu	Met	Leu	Pro	Gly 585	Ser	Val	Trp	Met	Asp 590	Arg	Asp
Val 595	Tyr	Leu	Gln	Gly	Pro	Ile	Trp 600	Ala	Lys	Ile	Pro	Glu 605	Thr	Gly	Ala

His Phe His Pro Ser Pro Ala Met Gly Gly Phe Gly Leu Lys His Pro
610 615 620

Pro Pro Met Met Leu Ile Lys Asn Thr Pro Val Pro Ser Asn Val Thr
625 630 635 640

Ala Phe Ser Glu Ile Pro Val Lys Ser Phe Ile Thr Gln Tyr Ser Thr
645 650 655

Gly Gln Val Thr Val Glu Met Glu Trp Glu Leu Lys Lys Glu Asn Ser
660 665 670

Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Asn Asn Tyr Asn Asn Pro
675 680 685

Glu Phe Val Asp Phe Ala Pro Asp Thr Ser Gly Glu Tyr Arg Thr Thr
690 695 700

Arg Ala Ile Gly Thr Arg Tyr Leu Thr Arg Pro Leu
705 710 715

<210> 65
<211> 716
<212> PRT
<213> Sus scrofa

<400> 65

Met Ser Phe Val Asp His Pro Pro Asp Trp Leu Glu Glu Ile Gly Glu
1 5 10 15

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

Pro Asn Gln Gln Lys Arg Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Asn Tyr Leu Gly Pro Gly Asn Gly Leu Gly Arg Gly Glu Pro Val
50 55 60

Asn Arg Ala Asp Glu Val Ala Arg Glu His Asp Ile Ser Tyr Asn Glu
65 70 75 80

Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
85 90 95

Ala Glu Phe Gln Glu Lys Leu Ala Asp Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro Phe
115 120 125

Gly Leu Val Glu Glu Pro Ala Lys Thr Ala Ala Lys Gly Glu Arg Ile
130 135 140

Asp Asp His Tyr Pro Lys Lys Lys Lys Ala Arg Val Glu Glu Thr Glu
145 150 155 160

Ala Gly Thr Ser Gly Gly Gln Gln Leu Gln Ile Pro Ala Gln Pro Ala
165 170 175

Ser Ser Leu Gly Ala Asp Thr Met Ser Ala Gly Gly Gly Ser Pro Leu
180 185 190

Gly Asp Asn Asn Gln Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asp
195 200 205

Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile Thr Lys Ser
210 215 220

Thr Arg Thr Trp Val Leu Pro Ser Tyr Asn Asn His Leu Tyr Lys Glu
225 230 235 240

Ile His Ser Gly Ser Val Asp Gly Ser Asn Ala Asn Ala Tyr Phe Gly
245 250 255

Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Ser His
260 265 270

Trp Ser Pro Arg Asp Trp Gln Arg Leu Val Asn Asn Tyr Trp Gly Leu
275 280 285

Arg Pro Arg Ser Leu Lys Val Lys Ile Phe Asn Ile Gln Val Lys Glu
290 295 300

Val Thr Val Gln Asp Ala Thr Thr Thr Ile Ala Asn Asn Leu Thr Ser
305 310 315 320

Thr Val Gln Val Phe Thr Asp Asp Asp Tyr Gln Leu Pro Tyr Val Ile
325 330 335

Gly Asn Gly Thr Glu Gly Cys Leu Pro Ala Phe Pro Pro Gln Val Phe
340 345 350

Thr Leu Pro Gln Tyr Gly Tyr Ala Thr Leu Asn Arg Asn Asn Thr Asp
355 360 365

Asp Pro Thr Glu Arg Ser Ser Phe Phe Cys Leu Glu Tyr Phe Pro Ser
370 375 380

Lys Met Leu Arg Thr Gly Asn Ser Phe Glu Phe Thr Tyr Ser Phe Glu
385 390 395 400

Glu Val Pro Phe His Cys Ser Phe Ala Pro Ser Gln Asn Leu Phe Lys
405 410 415

Leu Ala Asn Pro Leu Ala Asp Gln Tyr Leu Tyr Arg Phe Val Ser Thr
420 425 430

Asp Thr Ser Gly Asn Ile Gln Phe Gln Lys Asn Leu Lys Ala Arg Tyr
435 440 445

Ala Asn Thr Tyr Lys Asn Trp Phe Pro Gly Pro Met Cys Arg Thr Gln
450 455 460

Gly Trp Tyr Thr Gly Ser Gly Thr Tyr Asn Arg Ser Gly Val Thr Asn
465 470 475 480

Phe Ala Thr Ser Asn Arg Met Asp Leu Glu Gly Ala Ser Tyr Gln Val
485 490 495

Asn Pro Gln Pro Asn Gly Met Thr Asn Thr Leu Gln Asp Ser Asn Lys
500 505 510

Tyr Ala Leu Glu Asn Thr Met Ile Ser Asn Ser Gln Asn Ala Glu Pro
515 520 525

Gly Thr Thr Ser Leu Tyr Arg Glu Asn Asn Leu Leu Ile Thr Ser Glu
530 535 540

Ser Glu Thr Gln Pro Val Asn Arg Val Ala Tyr Asp Thr Gly Gly Gln
545 550 555 560

Met Ala Thr Asn Ala Gln Ser Thr Asn Leu Ala Pro Thr Val Gly Thr
565 570 575

Tyr Asn His Gln Glu Met Leu Pro Gly Ser Val Trp Met Asp Arg Asp
580 585 590

Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro Glu Thr Gly Ala
595 600 605

His Phe His Pro Ser Pro Ala Met Gly Gly Phe Gly Leu Lys His Pro
610 615 620

Pro Pro Met Met Leu Ile Lys Asn Thr Pro Val Pro Ser Asn Val Thr
625 630 635 640

Ala Phe Ser Glu Ile Pro Val Lys Ser Phe Ile Thr Gln Tyr Ser Thr
645 650 655

Gly Gln Val Thr Val Glu Met Glu Trp Glu Leu Lys Lys Glu Asn Ser
660 665 670

Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Asn Asn Tyr Asn Asn Pro
675 680 685

Glu Phe Val Asp Phe Ala Pro Asp Thr Ser Gly Glu Tyr Arg Thr Thr
690 695 700

Arg Ala Ile Gly Thr Arg Tyr Leu Thr Arg Pro Leu
705 710 715

<210> 66
<211> 716
<212> PRT
<213> Sus scrofa

<400> 66

Met Ser Phe Val Asp His Pro Pro Asp Trp Leu Glu Glu Ile Gly Glu
1 5 10 15

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

Pro Asn Gln Gln Lys Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly

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

Trp Ser Pro Arg Asp Trp Gln Arg Leu Val Asn Asn Tyr Trp Gly Phe
275 280 285

Arg Pro Arg Ser Leu Lys Val Lys Ile Phe Asn Ile Gln Val Lys Glu
290 295 300

Val Thr Val Gln Asp Ala Thr Thr Thr Ile Ala Asn Asn Leu Thr Ser
305 310 315 320

Thr Val Gln Val Phe Thr Asp Asp Asp Tyr Gln Leu Pro Tyr Val Ile
325 330 335

Gly Asn Gly Thr Glu Gly Cys Leu Pro Ala Phe Pro Pro Gln Val Phe
340 345 350

Thr Leu Pro Gln Tyr Gly Tyr Ala Thr Leu Asn Arg Asn Asn Thr Asp
355 360 365

Asp Pro Thr Glu Arg Ser Ser Phe Phe Cys Leu Glu Tyr Phe Pro Ser
370 375 380

Lys Met Leu Arg Thr Gly Asn Ser Phe Glu Phe Thr Tyr Ser Phe Glu
385 390 395 400

Glu Val Pro Phe His Cys Ser Phe Ala Pro Ser Gln Asn Leu Phe Lys
405 410 415

Leu Ala Asn Pro Leu Val Asp Gln Tyr Leu Tyr Arg Phe Val Ser Thr
420 425 430

Asp Thr Ser Gly Asn Ile Gln Phe Gln Lys Asn Leu Lys Ala Arg Tyr
435 440 445

Ala Asn Thr Tyr Lys Asn Trp Phe Pro Gly Pro Met Cys Arg Thr Gln
450 455 460

Gly Trp Tyr Thr Gly Ser Gly Thr Tyr Asn Arg Ser Gly Val Thr Asn
465 470 475 480

Phe Ala Thr Ser Asn Arg Met Asp Leu Glu Gly Ala Ser Tyr Gln Val
485 490 495

Asn Pro Gln Pro Asn Gly Met Thr Asn Thr Leu Gln Asp Ser Asn Lys

	500		505		510										
Tyr	Ala	Leu	Glu	Asn	Thr	Met	Ile	Phe	Asn	Ser	Gln	Asn	Ala	Glu	Pro
	515						520					525			
Gly	Thr	Thr	Ser	Leu	Tyr	Gln	Glu	Asn	Asn	Leu	Leu	Ile	Thr	Ser	Glu
	530					535					540				
Ser	Gly	Thr	Gln	Pro	Val	Asn	Arg	Val	Ala	Tyr	Asp	Thr	Gly	Gly	Gln
545					550					555					560
Met	Ala	Thr	Asn	Ala	Gln	Ser	Thr	Asn	Leu	Ala	Pro	Thr	Val	Gly	Thr
				565					570					575	
Tyr	Asn	His	Gln	Glu	Met	Leu	Pro	Gly	Ser	Val	Trp	Met	Asp	Arg	Gly
			580					585					590		
Val	Tyr	Leu	Gln	Gly	Pro	Ile	Trp	Ala	Lys	Ile	Pro	Glu	Thr	Gly	Ala
		595					600					605			
His	Phe	His	Pro	Ser	Pro	Ala	Met	Gly	Gly	Phe	Gly	Leu	Lys	His	Pro
	610					615					620				
Pro	Pro	Met	Met	Leu	Ile	Lys	Asn	Thr	Pro	Val	Pro	Ser	Asn	Val	Thr
625					630					635					640
Ala	Phe	Ser	Glu	Ile	Pro	Val	Lys	Ser	Phe	Val	Thr	Gln	Tyr	Ser	Thr
				645					650					655	
Gly	Gln	Val	Thr	Val	Glu	Met	Glu	Trp	Glu	Leu	Lys	Lys	Glu	Asn	Ser
			660					665					670		
Lys	Arg	Trp	Asn	Pro	Glu	Ile	Gln	Tyr	Thr	Asn	Asn	Tyr	Asn	Asn	Pro
		675					680					685			
Glu	Phe	Val	Asp	Phe	Ala	Pro	Asp	Thr	Ser	Gly	Glu	Tyr	Arg	Thr	Thr
	690					695					700				
Arg	Ala	Ile	Gly	Thr	Arg	Tyr	Leu	Thr	Arg	Pro	Leu				
705					710					715					

<210> 67
 <211> 716
 <212> PRT

<213> Sus scrofa

<400> 67

Met Ser Phe Val Asp His Pro Pro Asp Trp Leu Glu Glu Ile Gly Glu
1 5 10 15

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

Pro Asn Gln Gln Lys Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Asn Tyr Leu Gly Pro Gly Asn Gly Leu Asp Arg Gly Glu Pro Val
50 55 60

Asn Arg Ala Asp Glu Val Ala Arg Glu His Asp Ile Ser Tyr Asn Glu
65 70 75 80

Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
85 90 95

Ala Glu Phe Gln Glu Lys Leu Ala Asp Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro Phe
115 120 125

Gly Leu Val Glu Glu Pro Ala Lys Thr Ala Ala Lys Gly Glu Arg Ile
130 135 140

Asp Asp His Tyr Pro Lys Lys Lys Lys Ala Arg Val Glu Glu Thr Glu
145 150 155 160

Ala Gly Thr Ser Gly Gly Gln Gln Leu Gln Ile Pro Ala Gln Pro Ala
165 170 175

Ser Ser Leu Gly Ala Asp Thr Met Ser Ala Gly Gly Gly Ser Pro Leu
180 185 190

Gly Asp Asn Asn Gln Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asp
195 200 205

Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile Thr Lys Ser
210 215 220

Thr Arg Thr Trp Val Leu Pro Ser Tyr Asn Asn His Leu Tyr Lys Glu
225 230 235 240

Ile His Ser Gly Ser Val Asp Gly Ser Asn Ala His Ala Tyr Phe Gly
245 250 255

Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Ser His
260 265 270

Trp Ser Pro Arg Asp Trp Gln Arg Leu Val Asn Asn Tyr Trp Gly Phe
275 280 285

Arg Pro Arg Ser Leu Lys Val Lys Ile Phe Asn Ile Gln Val Lys Glu
290 295 300

Val Thr Val Gln Asp Ala Thr Thr Thr Ile Ala Asn Asn Leu Thr Ser
305 310 315 320

Thr Val Gln Val Phe Thr Asp Asp Asp Tyr Gln Leu Pro Tyr Val Ile
325 330 335

Gly Asn Gly Thr Glu Gly Cys Leu Pro Ala Phe Pro Pro Gln Val Phe
340 345 350

Thr Leu Pro Gln Tyr Gly Tyr Ala Thr Leu Asn Arg Asn Asn Thr Asp
355 360 365

Asp Pro Thr Glu Arg Ser Ser Phe Phe Cys Leu Glu Tyr Phe Pro Ser
370 375 380

Lys Met Leu Arg Thr Gly Asn Ser Phe Glu Phe Thr Tyr Ser Phe Glu
385 390 395 400

Glu Val Pro Phe His Cys Ser Phe Ala Pro Ser Gln Asn Leu Phe Lys
405 410 415

Leu Ala Asn Pro Leu Val Asp Gln Tyr Leu Tyr Arg Phe Val Ser Thr
420 425 430

Asp Thr Ser Gly Asn Ile Gln Phe Gln Lys Asn Leu Lys Ala Arg Tyr
435 440 445

Ala Asn Thr Tyr Lys Asn Trp Phe Pro Gly Pro Met Cys Arg Thr Gln
450 455 460

Gly Trp Tyr Thr Gly Ser Gly Thr Tyr Asn Arg Ser Gly Val Thr Asn
465 470 475 480

Phe Ala Thr Ser Asn Arg Met Asp Leu Glu Gly Ala Ser Tyr Gln Val
485 490 495

Asn Pro Gln Pro Asn Gly Met Thr Asn Thr Leu Gln Asp Ser Asn Lys
500 505 510

Tyr Ala Leu Glu Asn Thr Met Ile Phe Asn Ser Gln Asn Ala Glu Pro
515 520 525

Gly Thr Thr Ser Leu Tyr Gln Glu Asn Asn Leu Leu Ile Thr Ser Glu
530 535 540

Ser Glu Thr Gln Pro Val Asn Arg Val Ala Tyr Asp Thr Gly Gly Gln
545 550 555 560

Met Ala Thr Asn Ala Gln Ser Thr Asn Leu Ala Pro Thr Val Gly Thr
565 570 575

Tyr Asn His Gln Glu Met Leu Pro Gly Ser Val Trp Met Asp Arg Asp
580 585 590

Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro Glu Thr Gly Ala
595 600 605

His Phe His Pro Ser Pro Ala Met Gly Gly Phe Gly Leu Lys His Pro
610 615 620

Pro Pro Met Met Leu Ile Lys Asn Thr Pro Val Pro Ser Asn Val Thr
625 630 635 640

Ala Phe Ser Glu Ile Pro Val Lys Ser Phe Ile Thr Gln Tyr Ser Thr
645 650 655

Gly Gln Val Thr Val Glu Met Glu Trp Glu Leu Lys Lys Glu Asn Ser
660 665 670

Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Asn Asn Tyr Asn Asn Pro
675 680 685

Glu Phe Val Asp Phe Ala Pro Asp Thr Ser Gly Glu Tyr Arg Thr Thr
690 695 700

Arg Ala Ile Gly Thr Arg Tyr Leu Thr Arg Pro Leu
705 710 715

<210> 68
<211> 716
<212> PRT
<213> Sus scrofa

<400> 68

Met Ser Phe Val Asp His Pro Pro Asp Trp Leu Glu Glu Ile Gly Glu
1 5 10 15

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

Pro Asn Gln Gln Lys Arg Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Asn Tyr Leu Gly Pro Gly Asn Gly Leu Asp Arg Gly Glu Pro Val
50 55 60

Asn Arg Ala Asp Glu Val Ala Arg Glu His Asp Ile Ser Tyr Asn Glu
65 70 75 80

Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
85 90 95

Ala Glu Phe Gln Glu Lys Leu Ala Asp Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro Phe
115 120 125

Gly Leu Val Glu Glu Pro Ala Lys Thr Ala Ala Lys Gly Glu Arg Ile
130 135 140

Asp Asp His Tyr Pro Lys Lys Lys Lys Ala Arg Val Glu Glu Thr Glu
145 150 155 160

Ala Gly Thr Ser Gly Gly Gln Gln Leu Gln Ile Pro Ala Gln Pro Ala

165

170

175

Ser Ser Leu Gly Ala Asp Thr Met Ser Ala Gly Gly Gly Ser Pro Leu
 180 185 190

Gly Asp Asn Asn Gln Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asp
 195 200 205

Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile Thr Lys Ser
 210 215 220

Thr Arg Thr Trp Val Leu Pro Ser Tyr Asn Asn His Leu Tyr Lys Glu
 225 230 235 240

Ile His Ser Gly Ser Val Asp Gly Ser Asn Ala Asn Ala Tyr Phe Gly
 245 250 255

Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Ser His
 260 265 270

Trp Ser Pro Arg Asp Trp Gln Arg Leu Val Asn Asn Tyr Trp Gly Phe
 275 280 285

Arg Pro Arg Ser Leu Lys Val Lys Ile Phe Asn Ile Gln Val Lys Glu
 290 295 300

Val Thr Val Gln Asp Ala Thr Thr Thr Ile Ala Asn Asn Leu Thr Ser
 305 310 315 320

Thr Val Gln Val Phe Thr Asp Asp Asp Tyr Gln Leu Pro Tyr Val Ile
 325 330 335

Gly Asn Gly Thr Glu Gly Cys Leu Pro Ala Phe Pro Pro Gln Val Phe
 340 345 350

Thr Leu Pro Gln Tyr Gly Tyr Ala Thr Leu Asn Arg Asn Asn Thr Asp
 355 360 365

Asp Pro Thr Glu Arg Ser Ser Phe Phe Cys Leu Glu Tyr Phe Pro Ser
 370 375 380

Lys Met Leu Arg Thr Gly Asn Ser Phe Glu Phe Thr Tyr Ser Phe Glu
 385 390 395 400

Glu Val Pro Phe His Cys Ser Phe Ala Pro Ser Gln Asn Leu Phe Lys
405 410 415

Leu Ala Asn Pro Leu Val Asp Gln Tyr Leu Tyr Arg Phe Val Ser Thr
420 425 430

Asp Thr Ser Gly Asn Ile Gln Phe Gln Lys Asn Leu Lys Ala Arg Tyr
435 440 445

Ala Asn Thr Tyr Lys Asn Trp Phe Pro Gly Pro Met Cys Arg Thr Gln
450 455 460

Gly Trp Tyr Thr Gly Ser Gly Thr Tyr Asn Arg Ser Gly Val Thr Asn
465 470 475 480

Phe Ala Thr Ser Asn Arg Met Asp Leu Glu Gly Ala Ser Tyr Gln Val
485 490 495

Asn Pro Gln Pro Asn Gly Met Thr Asn Thr Leu Gln Asp Ser Asn Lys
500 505 510

Tyr Ala Leu Glu Asn Thr Met Ile Phe Asn Ser Gln Asn Ala Glu Pro
515 520 525

Gly Thr Thr Ser Leu Tyr Gln Glu Asn Asn Leu Leu Ile Thr Ser Glu
530 535 540

Ser Glu Thr Gln Pro Val Asn Arg Val Ala Tyr Asp Thr Gly Gly Gln
545 550 555 560

Met Ala Thr Asn Ala Gln Ser Thr Asn Leu Ala Pro Thr Val Gly Thr
565 570 575

Tyr Asn His Gln Glu Met Leu Pro Gly Ser Val Trp Met Asp Arg Asp
580 585 590

Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro Glu Thr Gly Ala
595 600 605

His Phe His Pro Ser Pro Ala Met Gly Gly Phe Gly Leu Lys His Pro
610 615 620

Pro Pro Met Met Leu Ile Lys Asn Thr Pro Val Pro Ser Asn Val Thr

625		630		635		640
Ala Phe Ser Glu Ile Pro Val Lys Ser Phe Ile Thr Gln Tyr Ser Thr						
	645			650		655
Gly Gln Val Thr Val Glu Met Glu Trp Glu Leu Lys Lys Glu Asn Ser						
	660			665		670
Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Asn Asn Tyr Asn Asn Pro						
	675			680		685
Glu Phe Val Gly Phe Ala Pro Asp Thr Ser Gly Glu Tyr Arg Thr Thr						
	690			695		700
Arg Ala Ile Gly Thr Arg Tyr Leu Thr Arg Pro Leu						
705		710		715		
<210> 69						
<211> 716						
<212> PRT						
<213> Sus scrofa						
<400> 69						
Met Ser Phe Val Asp His Pro Pro Asp Trp Leu Glu Glu Ile Gly Glu						
1	5			10		15
Gly Leu Lys Glu Phe Leu Gly Leu Glu Pro Gly Pro Pro Lys Pro Lys						
	20			25		30
Pro Asn Gln Gln Lys Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly						
	35			40		45
Tyr Asn Tyr Leu Gly Pro Gly Asn Gly Leu Asp Arg Gly Glu Pro Val						
	50			55		60
Asn Arg Ala Asp Glu Val Ala Arg Glu His Asp Ile Ser Tyr Asn Glu						
65		70		75		80
Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp						
	85			90		95
Ala Glu Phe Gln Glu Lys Leu Ala Asp Asp Thr Ser Phe Gly Gly Asn						
	100			105		110

Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro Phe
115 120 125

Gly Leu Val Glu Glu Pro Ala Lys Thr Ala Ala Lys Gly Glu Arg Ile
130 135 140

Gly Asp His Tyr Pro Lys Lys Lys Lys Ala Arg Val Glu Glu Thr Glu
145 150 155 160

Ala Gly Thr Ser Gly Gly Gln Gln Pro Gln Ile Pro Ala Gln Pro Ala
165 170 175

Ser Ser Leu Gly Ala Asp Thr Met Ser Ala Gly Gly Gly Ser Pro Leu
180 185 190

Gly Asp Asn Asn Gln Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asp
195 200 205

Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile Thr Lys Ser
210 215 220

Thr Arg Thr Trp Val Leu Pro Ser Tyr Asn Asn His Leu Tyr Lys Glu
225 230 235 240

Ile His Ser Gly Ser Val Asp Gly Ser Asn Ala Asn Ala Tyr Phe Gly
245 250 255

Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Ser His
260 265 270

Trp Ser Pro Arg Asp Trp Gln Arg Leu Val Asn Asn Tyr Trp Gly Phe
275 280 285

Arg Pro Arg Ser Leu Lys Val Lys Ile Phe Asn Ile Gln Val Lys Glu
290 295 300

Val Thr Val Gln Asp Ala Thr Thr Thr Ile Ala Asn Asn Leu Thr Ser
305 310 315 320

Thr Val Gln Val Phe Thr Asp Asp Asp Tyr Gln Leu Pro Tyr Val Ile
325 330 335

Gly Asn Gly Thr Glu Gly Cys Leu Pro Ala Phe Pro Pro Gln Val Phe
340 345 350

Thr Leu Pro Gln Tyr Gly Tyr Ala Thr Leu Asn Arg Asn Asn Thr Asp
355 360 365

Asp Pro Thr Glu Arg Ser Ser Phe Phe Cys Leu Glu Tyr Leu Pro Ser
370 375 380

Lys Met Leu Arg Thr Gly Asn Ser Phe Glu Phe Thr Tyr Ser Phe Glu
385 390 395 400

Glu Val Pro Phe His Cys Ser Phe Ala Pro Ser Gln Asn Leu Phe Lys
405 410 415

Leu Ala Asn Pro Leu Val Asp Gln Tyr Leu Tyr Arg Phe Val Ser Thr
420 425 430

Asp Thr Ser Gly Asn Ile Gln Phe Gln Lys Asn Leu Lys Ala Arg Tyr
435 440 445

Ala Asn Thr Tyr Lys Asn Trp Phe Pro Gly Pro Met Cys Arg Thr Gln
450 455 460

Gly Trp Tyr Thr Gly Ser Gly Thr Tyr Asn Arg Ser Gly Val Thr Asn
465 470 475 480

Phe Ala Thr Ser Asn Arg Met Asp Leu Glu Gly Ala Ser Tyr Gln Val
485 490 495

Asn Pro Gln Pro Asn Gly Met Thr Asn Thr Leu Gln Asp Ser Asn Lys
500 505 510

Tyr Ala Leu Glu Asn Thr Met Ile Phe Asn Ser Gln Asn Ala Glu Pro
515 520 525

Gly Thr Thr Ser Leu Tyr Gln Glu Asn Asn Leu Leu Ile Thr Ser Glu
530 535 540

Ser Glu Thr Gln Pro Val Asn Arg Val Ala Tyr Asn Thr Gly Gly Gln
545 550 555 560

Met Ala Thr Asn Ala Gln Ser Thr Asn Leu Ala Pro Thr Val Gly Thr
565 570 575

Tyr Asn His Gln Glu Met Leu Pro Gly Ser Val Trp Met Asp Arg Asp
580 585 590

Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro Glu Thr Gly Ala
595 600 605

His Phe His Pro Ser Pro Ala Met Gly Gly Phe Gly Leu Lys His Pro
610 615 620

Pro Pro Met Met Leu Ile Lys Asn Thr Pro Val Pro Ser Asn Val Thr
625 630 635 640

Ala Phe Ser Glu Ile Pro Val Lys Ser Phe Ile Thr Gln Tyr Ser Thr
645 650 655

Gly Gln Val Thr Val Glu Met Glu Trp Glu Leu Lys Lys Glu Asn Ser
660 665 670

Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Asn Asn Tyr Asn Asn Pro
675 680 685

Glu Phe Val Asp Phe Ala Pro Asp Thr Ser Gly Glu Tyr Arg Thr Thr
690 695 700

Arg Ala Ile Gly Thr Arg Tyr Leu Thr Arg Pro Leu
705 710 715

<210> 70
<211> 716
<212> PRT
<213> Sus scrofa

<400> 70

Met Ser Phe Val Asp His Pro Pro Asp Trp Leu Glu Glu Ile Gly Glu
1 5 10 15

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

Pro Asn Gln Gln Lys Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Asn Tyr Leu Gly Pro Gly Asn Gly Leu Asp Arg Gly Glu Pro Val
50 55 60

Asn Arg Ala Asp Glu Val Ala Arg Glu His Asp Ile Ser Tyr Asn Glu
65 70 75 80

Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
85 90 95

Ala Glu Phe Gln Glu Lys Leu Ala Asp Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro Phe
115 120 125

Gly Leu Val Glu Glu Pro Ala Lys Thr Ala Ala Lys Gly Glu Arg Ile
130 135 140

Asp Asp His Tyr Pro Lys Lys Lys Lys Ala Arg Val Glu Glu Thr Glu
145 150 155 160

Ala Gly Thr Ser Gly Gly Gln Gln Leu Gln Ile Pro Ala Gln Pro Ala
165 170 175

Ser Ser Leu Gly Ala Asp Thr Met Ser Ala Gly Gly Gly Ser Pro Leu
180 185 190

Gly Asp Asn Asn Gln Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asp
195 200 205

Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile Thr Lys Ser
210 215 220

Thr Arg Thr Trp Val Leu Pro Ser Tyr Asn Asn His Leu Tyr Lys Glu
225 230 235 240

Ile His Ser Gly Ser Val Asp Gly Ser Asn Ala Asn Ala Tyr Phe Gly
245 250 255

Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Ser His
260 265 270

Trp Ser Pro Arg Asp Trp Gln Arg Leu Val Asn Asn Tyr Trp Gly Phe
275 280 285

Arg Pro Arg Ser Leu Lys Val Lys Ile Phe Asn Ile Gln Val Lys Glu

290		295		300
Val Thr Val Gln Asp Ala Thr Thr Thr Ile Ala Asn Asn Leu Thr Ser				
305		310		315 320
Thr Val Gln Val Phe Thr Asp Asp Asp Tyr Gln Leu Pro Tyr Val Ile				
		325		330 335
Gly Asn Gly Thr Glu Gly Cys Leu Pro Ala Phe Pro Pro Gln Val Phe				
		340		345 350
Thr Leu Pro Gln Tyr Gly Tyr Ala Thr Leu Asn Arg Asn Asn Thr Asp				
		355		360 365
Asp Pro Thr Glu Arg Ser Ser Phe Phe Cys Leu Glu Tyr Phe Pro Ser				
		370		375 380
Lys Met Leu Arg Thr Gly Asn Ser Phe Glu Phe Thr Tyr Ser Phe Glu				
385		390		395 400
Glu Val Pro Phe His Cys Ser Phe Ala Pro Ser Gln Asn Leu Phe Lys				
		405		410 415
Leu Ala Asn Pro Leu Val Asp Gln Tyr Leu Tyr Arg Phe Val Ser Thr				
		420		425 430
Asp Thr Pro Gly Asn Ile Gln Phe Gln Lys Asn Leu Lys Ala Arg Tyr				
		435		440 445
Ala Asn Thr Tyr Lys Asn Trp Phe Pro Gly Pro Met Cys Arg Thr Gln				
		450		455 460
Gly Trp Tyr Thr Gly Ser Gly Thr Tyr Asn Arg Ser Gly Val Thr Asn				
465		470		475 480
Phe Ala Thr Ser Asn Arg Met Asp Leu Glu Gly Ala Ser Tyr Gln Ala				
		485		490 495
Asn Pro Gln Pro Asn Gly Met Thr Asn Thr Leu Gln Asp Ser Asn Lys				
		500		505 510
Tyr Ala Leu Glu Asn Thr Met Ile Phe Asn Ser Gln Asn Ala Glu Pro				
		515		520 525

Gly Thr Thr Ser Leu Tyr Gln Glu Asn Asn Leu Leu Ile Thr Ser Glu
530 535 540

Ser Glu Thr Gln Pro Val Asn Arg Val Ala Tyr Asp Thr Gly Gly Gln
545 550 555 560

Met Ala Thr Asn Ala Gln Ser Thr Asn Leu Ala Pro Thr Val Gly Thr
565 570 575

Tyr Asn His Gln Glu Met Leu Pro Gly Ser Val Trp Met Asp Arg Asp
580 585 590

Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro Glu Thr Gly Ala
595 600 605

His Phe His Pro Ser Pro Ala Met Gly Gly Phe Gly Leu Lys His Pro
610 615 620

Pro Pro Met Met Leu Ile Lys Asn Thr Pro Val Pro Ser Asn Val Thr
625 630 635 640

Ala Phe Ser Glu Ile Pro Val Lys Ser Leu Ile Thr Gln Tyr Ser Thr
645 650 655

Gly Gln Val Thr Val Glu Met Glu Trp Glu Leu Lys Lys Glu Asn Ser
660 665 670

Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Asn Asn Tyr Asn Asn Pro
675 680 685

Glu Phe Val Asp Phe Ala Pro Asp Thr Ser Gly Glu Tyr Arg Thr Thr
690 695 700

Arg Ala Ile Gly Thr Arg Tyr Leu Thr Arg Pro Leu
705 710 715

<210> 71
<211> 736
<212> PRT
<213> Macaca mulatta

<400> 71

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Ala Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Ile Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Gly
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Thr Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

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

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Thr Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Leu Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Val
435 440 445

Arg Thr Gln Thr Thr Gly Thr Gly Gly Thr Gln Thr Leu Ala Phe Ser
450 455 460

Gln Ala Gly Pro Ser Ser Met Ala Asn Gln Ala Arg Asn Trp Val Pro
465 470 475 480

Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Thr Asn Gln Asn
485 490 495

Asn Asn Ser Asn Phe Ala Trp Thr Gly Ala Ala Lys Phe Lys Leu Asn
500 505 510

Gly Arg Asp Ser Leu Met Asn Pro Gly Val Ala Met Ala Ser His Lys
515 520 525

Asp Asp Asp Asp Arg Phe Phe Pro Ser Ser Gly Val Leu Ile Phe Gly
530 535 540

Lys Gln Gly Thr Gly Asn Asp Gly Val Asp Tyr Ser Gln Val Leu Ile
545 550 555 560

Thr Asp Glu Glu Glu Ile Lys Ala Thr Asn Pro Val Ala Thr Glu Glu
565 570 575

Tyr Gly Ala Val Ala Ile Asn Asn Gln Ala Ala Asn Thr Gln Ala Gln
580 585 590

Thr Gly Leu Val His Asn Gln Gly Val Ile Pro Gly Met Val Trp Gln
595 600 605

Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His
610 615 620

Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Leu
625 630 635 640

Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
645 650 655

Asp Pro Pro Leu Thr Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile Thr
660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln
675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn
690 695 700

Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Thr Glu Gly Val
705 710 715 720

Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
725 730 735

<210> 72
<211> 736
<212> PRT
<213> Macaca mulatta

<400> 72

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Ile Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Thr Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

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

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Pro
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Arg Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Thr Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Leu Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Ser Asn Asn Phe Gln Phe Ser Tyr Thr

				405						410					415	
Phe	Glu	Asp	Val	Pro	Phe	His	Ser	Ser	Tyr	Ala	His	Ser	Gln	Ser	Leu	
			420					425					430			
Asp	Arg	Leu	Met	Asn	Pro	Leu	Ile	Asp	Gln	Tyr	Leu	Tyr	Tyr	Leu	Val	
		435					440					445				
Arg	Thr	Gln	Thr	Thr	Gly	Thr	Gly	Gly	Thr	Gln	Thr	Leu	Ala	Phe	Ser	
	450					455					460					
Gln	Ala	Gly	Pro	Ser	Ser	Met	Ala	Asn	Gln	Ala	Arg	Asn	Trp	Val	Pro	
465					470				475						480	
Gly	Pro	Cys	Tyr	Arg	Gln	Gln	Arg	Val	Ser	Thr	Thr	Thr	Asn	Gln	Asn	
				485					490					495		
Asn	Asn	Ser	Asn	Phe	Ala	Trp	Thr	Gly	Ala	Ala	Lys	Phe	Lys	Leu	Asn	
			500					505					510			
Gly	Arg	Asp	Ser	Leu	Met	Asn	Pro	Gly	Val	Ala	Met	Ala	Ser	His	Lys	
		515					520					525				
Asp	Asp	Asp	Asp	Arg	Phe	Phe	Pro	Ser	Ser	Gly	Val	Leu	Ile	Phe	Gly	
	530					535					540					
Lys	Gln	Gly	Thr	Gly	Asn	Asp	Gly	Val	Asp	Tyr	Ser	Gln	Val	Leu	Ile	
545					550					555					560	
Thr	Asp	Glu	Glu	Glu	Ile	Lys	Ala	Thr	Asn	Pro	Val	Ala	Thr	Glu	Glu	
				565					570					575		
Tyr	Gly	Ala	Val	Ala	Ile	Asn	Asn	Gln	Ala	Ala	Asn	Thr	Gln	Ala	Gln	
			580					585					590			
Thr	Gly	Leu	Val	His	Asn	Gln	Gly	Val	Ile	Pro	Gly	Met	Val	Trp	Gln	
	595						600					605				
Asn	Arg	Asp	Val	Tyr	Leu	Gln	Gly	Pro	Ile	Trp	Ala	Lys	Ile	Pro	His	
	610					615					620					
Thr	Asp	Gly	Asn	Phe	His	Pro	Ser	Pro	Leu	Met	Gly	Gly	Phe	Gly	Leu	
625					630					635					640	

Lys Leu Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
645 650 655

Asp Pro Pro Leu Thr Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile Thr
660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln
675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn
690 695 700

Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Thr Glu Gly Val
705 710 715 720

Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
725 730 735

<210> 73
<211> 736
<212> PRT
<213> Macaca mulatta

<400> 73

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Ile Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Pro Ser Gly Ile Gly
145 150 155 160

Lys Thr Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

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

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Thr Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Leu Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Val
435 440 445

Arg Thr Gln Thr Thr Gly Thr Gly Gly Thr Gln Thr Leu Ala Phe Ser
450 455 460

Gln Ala Gly Pro Ser Ser Met Ala Asn Gln Ala Arg Asn Trp Val Pro
465 470 475 480

Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Thr Asn Gln Asn
485 490 495

Asn Asn Ser Asn Phe Ala Trp Thr Gly Ala Ala Lys Phe Lys Leu Asn
500 505 510

Gly Arg Asp Ser Leu Met Asn Pro Gly Val Ala Met Ala Ser His Lys
515 520 525

Asp Asp Asp Asp Arg Phe Phe Pro Ser Ser Gly Val Leu Ile Phe Gly
530 535 540

Lys Gln Gly Thr Gly Asn Asp Gly Val Asp Tyr Ser Gln Val Leu Ile
545 550 555 560

Thr Asp Glu Glu Glu Ile Lys Ala Thr Asn Pro Val Ala Thr Glu Glu
565 570 575

Tyr Gly Ala Val Ala Ile Asn Asn Gln Ala Ala Asn Thr Gln Ala Gln
580 585 590

Thr Gly Leu Val His Asn Gln Gly Val Ile Pro Gly Met Val Trp Gln
595 600 605

Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His
610 615 620

Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Leu
625 630 635 640

Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
645 650 655

Asp Pro Pro Leu Thr Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile Thr
660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln
675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn
690 695 700

Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Thr Glu Gly Val
705 710 715 720

Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
725 730 735

<210> 74
<211> 736
<212> PRT
<213> Macaca mulatta

<400> 74

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro

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

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Thr Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Leu Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Ser Asn Asn Phe Gln Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Cys Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Val
435 440 445

Arg Thr Gln Thr Thr Gly Thr Gly Gly Thr Gln Thr Leu Ala Phe Ser
450 455 460

Gln Ala Gly Pro Gly Ser Met Ala Asn Gln Ala Arg Asn Trp Val Pro
465 470 475 480

Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Thr Asn Gln Asn
485 490 495

Asn Asn Ser Asn Phe Ala Trp Thr Gly Ala Ala Lys Phe Lys Leu Asn

500					505					510					
Gly	Arg	Asp	Ser	Leu	Met	Asn	Pro	Gly	Val	Ala	Met	Ala	Ser	His	Lys
		515					520					525			
Asp	Asp	Asp	Asp	Arg	Phe	Phe	Pro	Ser	Ser	Gly	Val	Leu	Ile	Phe	Gly
	530					535						540			
Lys	Gln	Gly	Thr	Gly	Asn	Asp	Gly	Val	Asp	Tyr	Ser	Gln	Val	Leu	Ile
545						550					555				560
Thr	Asp	Glu	Glu	Glu	Ile	Lys	Ala	Thr	Asn	Pro	Val	Ala	Thr	Glu	Glu
				565					570					575	
Tyr	Gly	Ala	Val	Ala	Ile	Asn	Asn	Gln	Ala	Ala	Asn	Thr	Gln	Ala	Gln
			580					585					590		
Thr	Gly	Leu	Val	His	Asn	Gln	Gly	Val	Ile	Pro	Gly	Met	Val	Trp	Gln
		595					600					605			
Asn	Arg	Asp	Val	Tyr	Leu	Gln	Gly	Pro	Ile	Trp	Ala	Lys	Ile	Pro	His
	610					615					620				
Thr	Asp	Gly	Asn	Phe	His	Pro	Pro	Pro	Leu	Met	Gly	Gly	Phe	Gly	Leu
625						630					635				640
Lys	His	Pro	Pro	Pro	Gln	Ile	Leu	Ile	Lys	Asn	Thr	Pro	Val	Pro	Ala
				645					650					655	
Asp	Pro	Pro	Leu	Thr	Phe	Asn	Gln	Ala	Lys	Leu	Asn	Ser	Phe	Ile	Thr
			660					665					670		
Gln	Tyr	Ser	Thr	Gly	Gln	Val	Ser	Val	Glu	Ile	Glu	Trp	Glu	Leu	Gln
		675					680					685			
Lys	Glu	Asn	Ser	Lys	Arg	Trp	Asn	Pro	Glu	Ile	Gln	Tyr	Thr	Ser	Asn
	690					695					700				
Tyr	Tyr	Lys	Ser	Thr	Asn	Val	Asp	Phe	Ala	Val	Asn	Thr	Glu	Gly	Val
705						710					715				720
Tyr	Ser	Glu	Pro	Arg	Pro	Ile	Gly	Thr	Arg	Tyr	Leu	Thr	Arg	Asn	Leu
				725					730					735	

<210> 75
<211> 736
<212> PRT
<213> Macaca mulatta

<400> 75

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Phe Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Ile Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Thr Gly Arg Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

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

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Gly Thr Pro Gly Gly Ser Thr Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Ala Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Thr Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Leu Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Val
435 440 445

Arg Thr Gln Thr Thr Gly Thr Gly Gly Thr Gln Thr Leu Ala Phe Ser
450 455 460

Gln Ala Gly Pro Ser Ser Met Ala Asn Gln Ala Arg Asn Trp Val Pro
465 470 475 480

Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Thr Asn Gln Asn
485 490 495

Asn Asn Ser Asn Phe Ala Trp Thr Gly Ala Ala Lys Phe Lys Leu Asn
500 505 510

Gly Arg Asp Ser Leu Met Asn Pro Gly Val Ala Met Ala Ser His Lys
515 520 525

Asp Asp Asp Asp Arg Phe Phe Pro Ser Ser Gly Val Leu Ile Phe Gly
530 535 540

Lys Gln Gly Thr Gly Asn Asp Gly Val Asp Tyr Ser Gln Val Leu Ile
545 550 555 560

Thr Asp Glu Glu Glu Ile Lys Ala Thr Asn Pro Val Ala Thr Glu Glu
565 570 575

Tyr Gly Ala Val Ala Ile Asn Asn Gln Ala Ala Asn Thr Gln Ala Gln
580 585 590

Thr Gly Leu Val His Asn Gln Gly Val Ile Pro Gly Met Val Trp Gln
595 600 605

Asn Arg Asp Val Tyr Gln Gln Gly Pro Ile Trp Ala Lys Ile Pro His
610 615 620

Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Leu
625 630 635 640

Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
645 650 655

Asp Pro Pro Leu Thr Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile Thr
660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln
675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn
690 695 700

Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Thr Glu Gly Val
705 710 715 720

Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
725 730 735

<210> 76
<211> 736
<212> PRT
<213> Macaca mulatta

<400> 76

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Ile Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg

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

Ala Asp Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Leu Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Ser Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Val
435 440 445

Arg Thr Gln Thr Thr Gly Thr Gly Gly Thr Gln Thr Leu Ala Phe Ser
450 455 460

Gln Ala Gly Pro Ser Ser Met Ala Asn Gln Ala Arg Asn Trp Val Pro
465 470 475 480

Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Thr Asn Gln Asn
485 490 495

Asn Asn Ser Asn Phe Ala Trp Thr Gly Ala Ala Lys Phe Lys Leu Asn
500 505 510

Gly Arg Asp Ser Leu Met Asn Pro Gly Val Ala Met Ala Ser His Lys
515 520 525

Asp Asp Asp Asp Arg Phe Phe Pro Ser Ser Gly Val Leu Ile Phe Gly
530 535 540

Lys Gln Gly Thr Gly Asn Asp Gly Val Asp Tyr Ser Gln Val Leu Ile
545 550 555 560

Thr Asp Glu Glu Glu Ile Lys Ala Thr Asn Pro Val Ala Thr Glu Glu
565 570 575

Tyr Gly Ala Val Ala Ile Asn Asn Gln Ala Ala Asn Thr Gln Ala Gln
580 585 590

Thr Gly Leu Val His Asn Gln Gly Val Ile Pro Gly Met Val Trp Gln

595

600

605

Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His
 610 615 620

Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Leu
 625 630 635 640

Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
 645 650 655

Asp Pro Pro Leu Thr Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile Thr
 660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln
 675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn
 690 695 700

Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Thr Glu Gly Val
 705 710 715 720

Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
 725 730 735

<210> 77

<211> 736

<212> PRT

<213> Macaca mulatta

<400> 77

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
 1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
 35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
 50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Val Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Thr Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

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

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Thr Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala Tyr Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Leu Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Val
435 440 445

Arg Thr Gln Thr Thr Gly Thr Gly Gly Thr Gln Thr Leu Ala Phe Ser
450 455 460

Gln Ala Gly Pro Ser Ser Met Ala Asn Gln Ala Arg Asn Trp Val Pro
465 470 475 480

Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Thr Asn Gln Asn
485 490 495

Asn Asn Ser Asn Phe Ala Trp Thr Gly Ala Ala Lys Phe Lys Leu Asn
500 505 510

Gly Arg Asp Ser Leu Met Asn Pro Gly Val Ala Met Ala Ser His Lys
515 520 525

Asp Asp Asp Asp Arg Phe Phe Pro Ser Ser Gly Val Leu Ile Phe Gly
530 535 540

Lys Gln Gly Thr Gly Asn Asp Gly Val Asp Tyr Ser Gln Val Leu Ile
545 550 555 560

Thr Asp Glu Glu Glu Ile Lys Ala Thr Asn Pro Val Ala Thr Glu Glu
565 570 575

Tyr Gly Ala Val Ala Ile Asn Asn Gln Ala Ala Asn Thr Gln Ala Gln
580 585 590

Thr Gly Leu Val His Asn Gln Gly Val Ile Pro Gly Met Val Trp Gln
595 600 605

Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His
610 615 620

Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Leu
625 630 635 640

Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
645 650 655

Asp Pro Pro Leu Thr Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile Thr
660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln
675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn
690 695 700

Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Thr Glu Gly Val
705 710 715 720

Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
725 730 735

<210> 78

<211> 736

<212> PRT

<213> Macaca mulatta

<400> 78

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Val Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Thr Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

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

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile

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

Gln Ala Gly Pro Ser Ser Met Ala Asn Gln Ala Arg Asn Trp Val Pro
465 470 475 480

Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Thr Asn Gln Asn
485 490 495

Asn Asn Ser Asn Phe Ala Trp Thr Gly Ala Ala Lys Phe Lys Leu Asn
500 505 510

Gly Arg Asp Ser Leu Met Asn Pro Gly Val Ala Met Ala Ser His Lys
515 520 525

Asp Asp Asp Asp Arg Phe Phe Pro Ser Ser Gly Val Leu Ile Phe Gly
530 535 540

Lys Gln Gly Thr Gly Asn Asp Gly Val Asp Tyr Ser Gln Val Leu Ile
545 550 555 560

Thr Asp Glu Glu Glu Ile Lys Ala Thr Asn Pro Val Ala Thr Glu Glu
565 570 575

Tyr Gly Ala Val Ala Ile Asn Asn Gln Ala Ala Asn Thr Gln Ala Gln
580 585 590

Thr Gly Leu Val His Asn Gln Gly Val Ile Pro Gly Met Val Trp Gln
595 600 605

Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His
610 615 620

Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Leu
625 630 635 640

Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
645 650 655

Asp Pro Pro Leu Thr Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile Thr
660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln
675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn

690

695

700

Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Thr Glu Gly Val
 705 710 715 720

Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
 725 730 735

<210> 79

<211> 737

<212> PRT

<213> Macaca cyclopis

<400> 79

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
 1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
 20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
 35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
 50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
 65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
 85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
 100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
 115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
 130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
 145 150 155 160

Lys Lys Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

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

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Arg Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Lys Leu Ser Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Gln Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Ser Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Ser Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser
435 440 445

Arg Thr Gln Ser Thr Gly Gly Thr Ala Gly Thr Gln Gln Leu Leu Phe
450 455 460

Ser Gln Ala Gly Pro Asn Asn Met Ser Ala Gln Ala Lys Asn Trp Leu
465 470 475 480

Pro Gly Pro Met Tyr Arg Gln Gln Arg Val Ser Thr Thr Leu Ser Gln
485 490 495

Asn Asn Asn Ser Asn Phe Ala Trp Thr Gly Gly Thr Lys Tyr His Leu
500 505 510

Asn Gly Arg Asp Ser Leu Val Asn Pro Gly Val Ala Met Ala Thr Asn
515 520 525

Lys Asp Asp Glu Asp Arg Phe Phe Pro Ser Ser Gly Val Leu Met Phe
530 535 540

Gly Lys Gln Gly Ala Gly Lys Asp Asn Val Asp Tyr Ser Ser Val Met
545 550 555 560

Leu Thr Ser Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu
565 570 575

Gln Tyr Gly Val Val Ala Asp Asn Leu Gln Gln Gln Asn Thr Ala Pro
580 585 590

Ile Val Gly Ala Val Asn Ser Gln Glu Ala Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Ala Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asp Thr Glu Gly
705 710 715 720

Val Tyr Ser Glu His Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn
725 730 735

Leu

<210> 80
<211> 737
<212> PRT
<213> Macaca cyclopis

<400> 80

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Lys Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

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

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Lys Leu Ser Phe Lys Leu Phe Asn Ile

305		310		315		320
Gln Val Lys Glu Val Thr Gln Asn Glu Gly Thr Lys Thr Ile Ala Asn						
		325		330		335
Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu						
		340		345		350
Pro Tyr Val Pro Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro						
		355		360		365
Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn						
		370		375		380
Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe						
385		390		395		400
Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Ser Phe Ser Tyr Thr						
		405		410		415
Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu						
		420		425		430
Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser						
		435		440		445
Arg Thr Gln Ser Thr Gly Gly Thr Ala Gly Thr Gln Gln Leu Leu Phe						
		450		455		460
Ser Gln Ala Gly Pro Asn Asn Met Ser Ala Gln Ala Lys Asn Trp Leu						
465		470		475		480
Pro Gly Pro Met Tyr Arg Gln Gln Arg Val Ser Thr Thr Leu Ser Gln						
		485		490		495
Asn Asn Asn Ser Asn Phe Ala Trp Thr Gly Gly Thr Lys Tyr His Leu						
		500		505		510
Asn Gly Arg Asp Ser Leu Val Asn Pro Gly Val Ala Met Ala Thr Asn						
		515		520		525
Lys Asp Asp Glu Asp Arg Phe Phe Pro Ser Ser Gly Val Leu Met Phe						
		530		535		540

Gly Lys Gln Gly Ala Gly Lys Asp Asn Val Asp Tyr Ser Ser Val Met
545 550 555 560

Leu Thr Ser Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu
565 570 575

Gln Tyr Gly Val Val Ala Asp Asn Leu Gln Gln Gln Asn Thr Ala Pro
580 585 590

Ile Val Gly Ala Val Asn Ser Gln Gly Ala Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Pro Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Ala Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Thr Glu Gly
705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn
725 730 735

Leu

<210> 81

<211> 737

<212> PRT

<213> Macaca cyclopis

<400> 81

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Pro Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Lys Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

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

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Lys Leu Ser Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Gln Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Phe Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Ser Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser
435 440 445

Arg Thr Gln Ser Thr Gly Gly Thr Ala Gly Thr Gln Gln Leu Leu Phe
450 455 460

Ser Gln Ala Gly Pro Asn Asn Met Ser Ala Gln Ala Lys Asn Trp Leu
465 470 475 480

Pro Gly Pro Met Tyr Arg Gln Gln Arg Val Ser Thr Thr Leu Ser Gln
485 490 495

Asn Asn Asn Ser Asn Phe Ala Trp Thr Gly Gly Thr Lys Tyr His Leu
500 505 510

Asn Gly Arg Asp Ser Leu Val Asn Pro Gly Val Ala Met Ala Thr Asn
515 520 525

Lys Asp Asp Glu Asp Arg Phe Phe Pro Ser Ser Gly Val Leu Met Phe
530 535 540

Gly Lys Gln Gly Ala Gly Lys Asp Asn Val Asp Tyr Ser Ser Val Met
545 550 555 560

Leu Thr Ser Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu
565 570 575

Gln Tyr Gly Val Val Ala Asp Asn Leu Gln Gln Gln Asn Thr Ala Pro
580 585 590

Ile Val Gly Ala Val Asn Ser Gln Gly Ala Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Ala Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Arg Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Thr Glu Gly
705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn
725 730 735

Leu

<210> 82
<211> 737
<212> PRT
<213> Macaca cyclopis

<400> 82

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Glu Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Lys Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

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

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Lys Leu Ser Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Gln Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

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

370						375						380			
Gly	Ser	Gln	Ala	Val	Gly	Arg	Ser	Ser	Phe	Tyr	Cys	Leu	Glu	Tyr	Phe
385					390					395					400
Pro	Ser	Gln	Met	Leu	Arg	Thr	Gly	Asn	Asn	Phe	Ser	Phe	Ser	Tyr	Thr
				405					410					415	
Phe	Glu	Asp	Val	Pro	Phe	His	Ser	Ser	Tyr	Ala	His	Ser	Gln	Ser	Leu
			420					425					430		
Asp	Arg	Leu	Met	Asn	Pro	Leu	Ile	Asp	Gln	Tyr	Leu	Tyr	Tyr	Leu	Ser
		435					440					445			
Arg	Thr	Gln	Ser	Thr	Gly	Gly	Thr	Ala	Gly	Thr	Gln	Gln	Leu	Leu	Phe
	450					455					460				
Ser	Gln	Ala	Gly	Pro	Asn	Asn	Met	Ser	Ala	Gln	Ala	Lys	Asn	Trp	Leu
465					470					475					480
Pro	Gly	Pro	Met	Tyr	Arg	Gln	Gln	Arg	Val	Ser	Thr	Thr	Leu	Ser	Gln
				485					490					495	
Asn	Asn	Asn	Ser	Asn	Phe	Ala	Trp	Thr	Gly	Gly	Thr	Lys	Tyr	His	Leu
			500					505					510		
Asn	Gly	Arg	Asp	Ser	Leu	Val	Asn	Pro	Gly	Val	Ala	Met	Ala	Thr	Asn
			515				520					525			
Lys	Asp	Asp	Glu	Asp	Arg	Phe	Phe	Pro	Ser	Ser	Ala	Val	Leu	Met	Phe
	530					535					540				
Gly	Lys	Gln	Gly	Ala	Gly	Lys	Asp	Asn	Val	Asp	Tyr	Ser	Ser	Val	Met
545					550					555					560
Leu	Thr	Ser	Glu	Glu	Glu	Ile	Lys	Thr	Thr	Asn	Pro	Val	Thr	Thr	Glu
			565					570						575	
Gln	Tyr	Gly	Val	Val	Ala	Asp	Asn	Leu	Gln	Gln	Gln	Asn	Thr	Ala	Pro
			580					585					590		
Ile	Val	Gly	Ala	Val	Asn	Ser	Gln	Gly	Ala	Leu	Pro	Gly	Met	Val	Trp
		595					600					605			

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Ala Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Thr Glu Ser
705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn
725 730 735

Leu

<210> 83
<211> 737
<212> PRT
<213> Macaca cyclopis

<400> 83

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Pro Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Lys Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

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

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Ser His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Lys Leu Ser Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Gln Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Ser Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser
435 440 445

Arg Thr Gln Ser Thr Gly Gly Thr Ala Gly Thr Gln Gln Leu Leu Phe
450 455 460

Ser Gln Ala Gly Pro Asn Asn Met Ser Ala Gln Ala Lys Asn Trp Leu
465 470 475 480

Pro Gly Pro Met Tyr Arg Gln Gln Arg Val Ser Thr Thr Leu Ser Gln
485 490 495

Asn Asn Asn Ser Asn Phe Ala Trp Thr Gly Gly Thr Lys Tyr His Leu
500 505 510

Asn Gly Arg Asp Ser Leu Val Asn Pro Gly Val Ala Met Ala Thr Asn
515 520 525

Lys Asp Asp Glu Asp Arg Phe Phe Pro Ser Ser Gly Val Leu Met Phe
530 535 540

Gly Lys Gln Gly Ala Gly Lys Asp Asn Val Asp Tyr Ser Ser Val Met
545 550 555 560

Leu Thr Ser Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu
565 570 575

Gln Tyr Gly Val Val Ala Asp Asn Leu Gln Gln Gln Asn Thr Ala Pro
580 585 590

Ile Val Gly Ala Val Asn Ser Gln Gly Ala Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Ala Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Thr Glu Gly
705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn
725 730 735

Leu

<210> 84
<211> 737
<212> PRT
<213> Macaca cyclopis

<400> 84

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Lys Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

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

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Lys Leu Ser Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Gln Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Ser Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser

435																
Arg	Thr	Gln	Ser	Thr	Gly	Gly	Thr	Ala	Gly	Thr	Gln	Gln	Leu	Leu	Phe	
450						455					460					
Ser	Gln	Ala	Gly	Pro	Asn	Asn	Met	Ser	Ala	Gln	Ala	Lys	Asn	Trp	Leu	
465					470					475					480	
Pro	Gly	Pro	Met	Tyr	Arg	Gln	Gln	Arg	Val	Ser	Thr	Thr	Leu	Ser	Gln	
				485					490					495		
Asn	Asn	Asn	Ser	Asn	Phe	Ala	Trp	Thr	Gly	Gly	Thr	Lys	Tyr	His	Leu	
			500					505					510			
Asn	Gly	Arg	Asp	Ser	Leu	Val	Asn	Pro	Gly	Val	Ala	Met	Ala	Thr	Asn	
		515					520					525				
Lys	Asp	Asp	Glu	Asp	Arg	Leu	Phe	Pro	Ser	Ser	Gly	Val	Leu	Met	Phe	
530						535					540					
Gly	Lys	Gln	Gly	Ala	Gly	Lys	Asp	Asn	Val	Asp	Tyr	Ser	Ser	Val	Met	
545					550					555					560	
Leu	Thr	Ser	Glu	Glu	Glu	Val	Lys	Thr	Thr	Asn	Pro	Val	Ala	Thr	Glu	
				565					570					575		
Gln	Tyr	Gly	Val	Val	Ala	Asp	Asn	Leu	Gln	Gln	Gln	Asn	Thr	Ala	Pro	
			580					585					590			
Ile	Val	Gly	Ala	Val	Asn	Ser	Gln	Gly	Ala	Leu	Pro	Gly	Met	Val	Trp	
		595					600					605				
Gln	Asn	Arg	Asp	Val	Tyr	Leu	Gln	Gly	Pro	Ile	Trp	Ala	Lys	Ile	Pro	
	610					615					620					
His	Thr	Asp	Gly	Asn	Phe	His	Pro	Ser	Pro	Leu	Met	Gly	Gly	Phe	Gly	
625					630					635					640	
Leu	Lys	His	Pro	Pro	Pro	Gln	Ile	Leu	Ile	Lys	Asn	Thr	Pro	Val	Pro	
				645					650					655		
Ala	Asp	Pro	Pro	Thr	Ala	Phe	Asn	Gln	Ala	Lys	Leu	Asn	Ser	Phe	Ile	
			660					665					670			

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Thr Glu Gly
705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn
725 730 735

Leu

<210> 85
<211> 737
<212> PRT
<213> Macaca cyclopis

<400> 85

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Arg Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Lys Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

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

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Lys Leu Ser Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Gln Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala Arg Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Ser Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser
435 440 445

Arg Thr Gln Ser Thr Gly Gly Thr Ala Gly Thr Gln Gln Leu Leu Phe
450 455 460

Ser Gln Ala Gly Pro Asn Asn Met Ser Ala Gln Ala Lys Asn Trp Leu
465 470 475 480

Pro Gly Pro Met Tyr Arg Gln Gln Arg Val Ser Thr Thr Leu Ser Gln
485 490 495

Asn Asn Asn Ser Asn Phe Ala Trp Thr Gly Gly Thr Lys Tyr His Leu
500 505 510

Asn Gly Arg Asp Ser Leu Val Asn Pro Gly Val Ala Met Ala Thr Asn
515 520 525

Lys Asp Asp Glu Asp Arg Phe Phe Pro Ser Ser Gly Val Leu Met Phe
530 535 540

Gly Lys Gln Gly Ala Gly Lys Asp Asn Val Asp Tyr Ser Ser Val Met
545 550 555 560

Leu Thr Ser Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu
565 570 575

Gln Tyr Gly Val Val Ala Asp Asn Leu Gln Gln Gln Asn Thr Ala Pro
580 585 590

Ile Val Gly Ala Val Asn Ser Gln Gly Ala Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Ala Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asp Thr Glu Gly
705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn
725 730 735

Leu

<210> 86
<211> 737
<212> PRT
<213> Macaca cyclopis

<400> 86

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro

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

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Lys Leu Ser Phe Lys Leu Phe Asp Ile
305 310 315 320

Gln Val Lys Glu Val Thr Gln Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Ser Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser
435 440 445

Arg Thr Gln Ser Thr Gly Gly Thr Ala Gly Thr Gln Gln Leu Leu Phe
450 455 460

Ser Gln Ala Gly Pro Asn Asn Met Ser Ala Gln Ala Lys Asn Trp Leu
465 470 475 480

Pro Gly Pro Met Tyr Arg Gln Gln Arg Val Ser Thr Thr Leu Ser Gln
485 490 495

Asn Asn Asn Ser Asn Phe Ala Trp Thr Gly Gly Thr Lys Tyr His Leu

500							505					510			
Asn	Gly	Arg	Asp	Ser	Leu	Val	Asn	Pro	Gly	Val	Ala	Met	Ala	Thr	Asn
		515					520					525			
Lys	Asp	Asp	Glu	Asp	Arg	Phe	Phe	Pro	Ser	Ser	Gly	Val	Leu	Met	Phe
	530					535					540				
Gly	Lys	Gln	Gly	Ala	Gly	Lys	Asp	Asn	Val	Asp	Tyr	Ser	Ser	Val	Met
545					550					555					560
Leu	Thr	Ser	Glu	Glu	Glu	Ile	Lys	Thr	Thr	Asn	Pro	Val	Ala	Thr	Glu
				565					570					575	
Gln	Tyr	Gly	Val	Val	Ala	Asp	Asn	Leu	Gln	Gln	Gln	Asn	Thr	Ala	Pro
			580					585					590		
Ile	Val	Gly	Ala	Val	Asn	Ser	Gln	Gly	Ala	Leu	Pro	Gly	Met	Val	Trp
		595					600					605			
Gln	Asn	Arg	Asp	Val	Tyr	Leu	Gln	Gly	Pro	Ile	Trp	Ala	Lys	Ile	Pro
	610					615					620				
His	Thr	Asp	Gly	Asn	Phe	His	Pro	Ser	Pro	Leu	Met	Gly	Gly	Phe	Gly
625					630					635					640
Leu	Lys	His	Pro	Pro	Pro	Gln	Ile	Leu	Ile	Lys	Asn	Thr	Pro	Val	Pro
				645					650					655	
Ala	Asp	Pro	Pro	Thr	Ala	Phe	Asn	Gln	Ala	Lys	Leu	Asn	Ser	Phe	Ile
			660					665					670		
Thr	Gln	Tyr	Ser	Thr	Gly	Gln	Val	Ser	Val	Glu	Ile	Glu	Trp	Glu	Leu
		675					680					685			
Gln	Lys	Glu	Asn	Ser	Lys	Arg	Trp	Asn	Pro	Glu	Ile	Gln	Tyr	Thr	Ser
	690					695					700				
Asn	Tyr	Tyr	Lys	Ser	Thr	Asn	Val	Asp	Phe	Ala	Val	Asn	Thr	Glu	Gly
705					710					715					720
Val	Tyr	Ser	Glu	Pro	Arg	Pro	Ile	Gly	Thr	Arg	Tyr	Leu	Thr	Arg	Asn
				725					730					735	

Leu

<210> 87
<211> 737
<212> PRT
<213> Macaca cyclopis

<400> 87

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Lys Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

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

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Lys Leu Ser Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Gln Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Ser Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser
435 440 445

Arg Thr Gln Ser Thr Gly Gly Thr Ala Gly Thr Gln Gln Leu Leu Phe
450 455 460

Ser Gln Ala Gly Pro Asn Asn Met Ser Ala Gln Ala Lys Asn Trp Leu
465 470 475 480

Pro Gly Pro Met Tyr Arg Gln Gln Arg Val Ser Thr Thr Leu Ser Gln
485 490 495

Asn Asn Asn Ser Asn Phe Ala Trp Thr Gly Gly Thr Lys Tyr His Leu
500 505 510

Asn Gly Arg Asp Ser Leu Val Asn Pro Gly Val Ala Met Ala Thr Asn
515 520 525

Lys Asp Asp Glu Asp Arg Phe Phe Pro Ser Ser Ala Val Leu Met Phe
530 535 540

Gly Lys Gln Gly Ala Gly Lys Asp Asn Val Asp Tyr Ser Ser Val Met
545 550 555 560

Leu Thr Ser Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu
565 570 575

Gln Tyr Gly Val Val Ala Asp Asn Leu Gln Gln Gln Asn Thr Ala Pro
580 585 590

Ile Val Gly Ala Val Asn Ser Gln Gly Ala Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Ala Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Thr Glu Ser
705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn
725 730 735

Leu

<210> 88
<211> 737
<212> PRT
<213> Macaca cyclopis

<400> 88

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly

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

Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Ser Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser
435 440 445

Arg Thr Gln Ser Thr Gly Gly Thr Ala Gly Thr Gln Gln Leu Leu Phe
450 455 460

Ser Gln Ala Gly Pro Asn Asn Met Ser Ala Gln Ala Lys Asn Trp Leu
465 470 475 480

Pro Gly Pro Met Tyr Arg Gln Gln Arg Val Ser Thr Thr Leu Ser Gln
485 490 495

Asn Asn Asn Ser Asn Phe Ala Trp Thr Gly Gly Thr Lys Tyr His Leu
500 505 510

Asn Gly Arg Asp Ser Leu Val Tyr Pro Gly Val Ala Met Ala Thr Asn
515 520 525

Lys Asp Asp Glu Asp Arg Phe Phe Pro Ser Ser Gly Val Leu Met Phe
530 535 540

Gly Lys Gln Gly Ala Gly Lys Asp Asn Val Asp Tyr Ser Ser Val Met
545 550 555 560

Leu Thr Ser Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu

565

570

575

Gln Tyr Gly Val Val Ala Asp Asn Leu Gln Gln Gln Asn Thr Ala Pro
580 585 590

Ile Val Gly Ala Val Asn Ser Gln Gly Ala Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Ala Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Thr Glu Gly
705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn
725 730 735

Leu

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<210> 89
<211> 737
<212> PRT
<213> Macaca cyclopis
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<400> 89

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Gly Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Arg Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Lys Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

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

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp Ser
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Ser His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Lys Leu Ser Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Gln Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Gly Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Ser Phe Ser Tyr Ile
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser
435 440 445

Arg Thr Gln Ser Thr Gly Gly Thr Ala Gly Thr Gln Gln Leu Leu Phe
450 455 460

Ser Gln Ala Gly Pro Asn Asn Met Ser Ala Gln Ala Lys Asn Trp Leu
465 470 475 480

Pro Gly Pro Met Tyr Arg Gln Gln Arg Val Ser Thr Thr Leu Ser Gln
485 490 495

Asn Asn Asn Ser Asn Phe Ala Trp Thr Gly Gly Thr Lys Tyr His Leu
500 505 510

Asn Gly Arg Asp Ser Leu Val Asn Pro Gly Val Ala Met Ala Thr Asn
515 520 525

Lys Asp Asp Glu Asp Arg Phe Phe Pro Ser Ser Gly Val Leu Met Phe
530 535 540

Gly Lys Gln Gly Ala Gly Lys Asp Asn Val Asp Tyr Ser Ser Val Met
545 550 555 560

Leu Thr Ser Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu
565 570 575

Gln Tyr Gly Val Val Ala Asp Asn Leu Gln Gln Gln Asn Thr Ala Pro
580 585 590

Ile Val Gly Ala Val Asn Ser Gln Gly Ala Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Ala Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Leu Lys Glu Ser Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Thr Glu Gly
705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn
725 730 735

Leu

<210> 90
<211> 737
<212> PRT
<213> Adeno-Associated Virus

<400> 90

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Pro Ser Pro Gln Arg Ser Pro Asp Ser Ser Thr Gly Ile
145 150 155 160

Gly Lys Lys Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln

165

170

175

Thr Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Ile Gly Glu Pro
 180 185 190

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

Gly Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser
 210 215 220

Ser Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val
 225 230 235 240

Ile Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His
 245 250 255

Leu Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp
 260 265 270

Asn Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn
 275 280 285

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
 290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn
 305 310 315 320

Ile Gln Val Lys Glu Val Thr Gln Asn Glu Gly Thr Lys Thr Ile Ala
 325 330 335

Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln
 340 345 350

Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe
 355 360 365

Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn
 370 375 380

Asn Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr
 385 390 395 400

Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Glu Phe Ser Tyr
405 410 415

Gln Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser
420 425 430

Leu Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu
435 440 445

Ser Lys Thr Ile Asn Gly Ser Gly Gln Asn Gln Gln Thr Leu Lys Phe
450 455 460

Ser Val Ala Gly Pro Ser Asn Met Ala Val Gln Gly Arg Asn Tyr Ile
465 470 475 480

Pro Gly Pro Ser Tyr Arg Gln Gln Arg Val Ser Thr Thr Val Thr Gln
485 490 495

Asn Asn Asn Ser Glu Phe Ala Trp Pro Gly Ala Ser Ser Trp Ala Leu
500 505 510

Asn Gly Arg Asn Ser Leu Met Asn Pro Gly Pro Ala Met Ala Ser His
515 520 525

Lys Glu Gly Glu Asp Arg Phe Phe Pro Leu Ser Gly Ser Leu Ile Phe
530 535 540

Gly Lys Gln Gly Thr Gly Arg Asp Asn Val Asp Ala Asp Lys Val Met
545 550 555 560

Ile Thr Asn Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu
565 570 575

Ser Tyr Gly Gln Val Ala Thr Asn His Gln Ser Ala Gln Ala Gln Ala
580 585 590

Gln Thr Gly Trp Val Gln Asn Gln Gly Ile Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly

625		630		635		640
Leu Lys His Pro	Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro					
	645		650		655	
Ala Asp Pro Pro Thr Thr Phe Ser Gln Ala Lys Leu Ala Ser Phe Ile						
	660		665		670	
Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu						
	675		680		685	
Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser						
	690		695		700	
Asn Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Thr Asp Gly						
705		710		715		720
Thr Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn						
	725		730		735	

Leu

<210> 91
 <211> 737
 <212> PRT
 <213> Adeno-Associated Virus

<400> 91

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser														
1		5		10		15								
Glu Gly Ile Arg Glu Trp Trp Asp Leu Lys Pro Gly Ala Pro Lys Pro														
	20		25		30									
Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro														
	35		40		45									
Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro														
	50		55		60									
Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp														
65		70		75		80								

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Pro Ser Pro Gln Arg Ser Pro Asp Ser Ser Thr Gly Ile
145 150 155 160

Gly Lys Lys Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln
165 170 175

Thr Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Ile Gly Glu Pro
180 185 190

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

Gly Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser
210 215 220

Ser Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val
225 230 235 240

Ile Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His
245 250 255

Leu Tyr Lys Gln Ile Ser Asn Ser Thr Ser Gly Gly Ser Ser Asn Asp
260 265 270

Asn Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn
275 280 285

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn
305 310 315 320

Ile Gln Val Lys Glu Val Thr Asp Asn Asn Gly Val Lys Thr Ile Ala
325 330 335

Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln
340 345 350

Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe
355 360 365

Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn
370 375 380

Asp Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr
385 390 395 400

Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Glu Phe Ser Tyr
405 410 415

Gln Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser
420 425 430

Leu Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu
435 440 445

Ser Arg Thr Ile Asn Gly Ser Gly Gln Asn Gln Gln Thr Leu Lys Phe
450 455 460

Ser Val Ala Gly Pro Ser Asn Met Ala Val Gln Ala Lys Asn Trp Leu
465 470 475 480

Pro Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Val Thr Gln
485 490 495

Asn Asn Asn Ser Glu Phe Ala Trp Pro Gly Ala Thr Lys Tyr His Leu
500 505 510

Asn Gly Arg Asp Ser Leu Val Asn Pro Gly Val Ala Met Ala Ser His
515 520 525

Lys Glu Gly Glu Asp Arg Phe Phe Pro Leu Ser Gly Ser Leu Met Phe
530 535 540

Gly Lys Gln Gly Thr Gly Arg Asp Asn Val Asp Ala Asp Lys Val Met
545 550 555 560

Leu Thr Ser Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu
565 570 575

Gln Tyr Gly Val Val Ala Thr Asn His Gln Ser Ala Gln Ala Gln Ala
580 585 590

Gln Thr Gly Trp Val Gln Asn Gln Gly Ile Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Thr Phe Ser Gln Ala Lys Leu Ala Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Tyr Lys Ser Asn Asn Val Glu Phe Ala Val Asn Thr Glu Gly
705 710 715 720

Thr Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn
725 730 735

Leu

<210> 92
<211> 731
<212> PRT
<213> Adeno-Associated Virus

<400> 92

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Asp Ser Pro Asp Ser Thr Ser Gly Ile Gly Lys Lys Gly Gln
145 150 155 160

Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr Gly Asp Ala Glu
165 170 175

Ser Val Pro Asp Pro Gln Pro Ile Gly Glu Pro Pro Ala Ala Pro Ser
180 185 190

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

Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asn Trp
210 215 220

His Cys Asp Ser Thr Trp Leu Gly Asn Arg Val Ile Thr Thr Ser Thr

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

Asn Met Ala Val Gln Gly Arg Asn Tyr Ile Pro Gly Pro Ser Tyr Arg
465 470 475 480

Gln Gln Arg Val Ser Thr Thr Val Thr Gln Asn Asn Asn Ser Glu Phe
485 490 495

Ala Trp Pro Gly Ala Ser Ser Trp Ala Leu Asn Gly Arg Asn Ser Leu
500 505 510

Met Asn Pro Gly Pro Ala Met Ala Ser His Lys Glu Gly Glu Asp Arg
515 520 525

Phe Phe Pro Leu Ser Gly Ser Leu Ile Phe Gly Lys Gln Gly Thr Gly
530 535 540

Arg Asp Asn Val Asp Ala Asp Lys Val Met Ile Thr Asn Glu Glu Glu
545 550 555 560

Ile Lys Thr Thr Asn Pro Val Ala Thr Glu Ser Tyr Gly Gln Val Ala
565 570 575

Thr Asn His Gln Ser Ala Gln Ala Gln Ala Gln Thr Gly Trp Val Gln
580 585 590

Asn Gln Gly Ile Leu Pro Gly Met Val Trp Gln Asn Arg Asp Val Tyr
595 600 605

Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly Asn Phe
610 615 620

His Pro Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro
625 630 635 640

Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Pro Glu Thr
645 650 655

Phe Thr Pro Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly
660 665 670

Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys
675 680 685

Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asp Lys Gln Thr

690

695

700

Gly Val Asp Phe Ala Val Asp Thr Gln Gly Val Tyr Ser Glu Pro Arg
 705 710 715 720

Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
 725 730

<210> 93

<211> 732

<212> PRT

<213> Adeno-Associated Virus

<400> 93

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
 1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
 20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
 35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
 50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
 65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
 85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
 100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
 115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Lys Arg
 130 135 140

Pro Val Asp Ser Pro Asp Ser Thr Ser Gly Ile Gly Lys Lys Gly Gln
 145 150 155 160

Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr Gly Asp Ala Glu
165 170 175

Ser Val Pro Asp Pro Gln Pro Ile Gly Glu Pro Pro Ala Ala Pro Ser
180 185 190

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

Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asn Trp
210 215 220

His Cys Asp Ser Thr Trp Leu Gly Asn Arg Val Ile Thr Thr Ser Thr
225 230 235 240

Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu Tyr Lys Gln Ile
245 250 255

Ser Asn Ser Thr Ser Gly Gly Ser Ser Asn Asp Asn His Tyr Phe Gly
260 265 270

Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Cys His
275 280 285

Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp Gly Phe
290 295 300

Arg Pro Lys Arg Leu Arg Phe Lys Leu Phe Asn Ile Gln Val Lys Glu
305 310 315 320

Val Thr Asp Asn Asn Gly Val Lys Thr Ile Ala Asn Asn Leu Thr Ser
325 330 335

Thr Val Gln Val Phe Ser Asp Ser Glu Tyr Gln Leu Pro Tyr Val Leu
340 345 350

Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp Val Phe
355 360 365

Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asp Gly Ser Gln Ala
370 375 380

Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser Gln Met
385 390 395 400

Leu Arg Thr Gly Asn Asn Phe Glu Phe Ser Tyr Glu Phe Glu Asp Val
405 410 415

Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg Leu Met
420 425 430

Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ala Arg Thr Ile Asn
435 440 445

Gly Ser Gly Gln Asn Gln Gln Thr Leu Lys Phe Ser Val Ala Gly Pro
450 455 460

Ser Asn Met Ala Val Gln Ser Lys Asn Trp Leu Pro Gly Pro Cys Phe
465 470 475 480

Arg Gln Gln Arg Val Ser Thr Thr Val Thr Gln Asn Asn Asn Ser Glu
485 490 495

Phe Ala Trp Pro Gly Ala Thr Lys Tyr His Leu Asn Gly Arg Asn Ser
500 505 510

Leu Thr Asn Pro Gly Val Pro Met Ala Ser His Lys Glu Gly Glu Asp
515 520 525

Arg Phe Phe Pro Leu Ser Gly Ser Leu Val Phe Gly Lys Gln Gly Thr
530 535 540

Gly Arg Asp Asn Val Asp Ala Asp Lys Val Leu Met Thr Asp Glu Glu
545 550 555 560

Glu Ile Lys Ala Thr Asn Pro Val Ala Thr Glu Glu Tyr Gly Val Val
565 570 575

Ala Thr Asn His Gln Ser Ala Gln Ala Gln Ala Gln Thr Gly Trp Val
580 585 590

Gln Asn Gln Gly Ile Leu Pro Gly Met Val Trp Gln Asn Arg Asp Val
595 600 605

Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly Asn
610 615 620

Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro
625 630 635 640

Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Pro Glu
645 650 655

Thr Phe Thr Pro Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr
660 665 670

Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser
675 680 685

Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Tyr Lys Ser
690 695 700

Asn Asn Val Glu Phe Ala Val Asn Thr Glu Gly Val Tyr Ser Glu Pro
705 710 715 720

Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
725 730

<210> 94
<211> 736
<212> PRT
<213> Adeno-Associated Virus

<400> 94

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asn Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Ala Lys Lys Arg
130 135 140

Pro Val Glu Pro Ser Pro Gln Arg Ser Pro Asp Ser Ser Thr Gly Ile
145 150 155 160

Gly Lys Lys Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln
165 170 175

Thr Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro
180 185 190

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

Gly Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn
210 215 220

Ala Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val
225 230 235 240

Ile Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His
245 250 255

Leu Tyr Lys Gln Ile Ser Asn Ser Thr Ser Gly Gly Ser Ser Asn Asp
260 265 270

Asn Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn
275 280 285

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Lys Leu Arg Phe Lys Leu Phe Asn
305 310 315 320

Ile Gln Val Lys Glu Val Thr Asp Asn Asn Gly Val Lys Thr Ile Ala

325

330

335

Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Ser Asp Ser Glu Tyr Gln
 340 345 350

Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe
 355 360 365

Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn
 370 375 380

Asp Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr
 385 390 395 400

Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Glu Phe Ser Tyr
 405 410 415

Ser Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser
 420 425 430

Leu Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu
 435 440 445

Ala Arg Thr Ile Asn Gly Ser Gly Gln Asn Gln Gln Thr Leu Lys Phe
 450 455 460

Ser Val Ala Gly Pro Ser Asn Met Ala Val Gln Ala Lys Asn Trp Leu
 465 470 475 480

Pro Gly Pro Cys Phe Arg Gln Gln Arg Val Ser Thr Thr Val Thr Gln
 485 490 495

Asn Asn Asn Ser Glu Phe Ala Trp Pro Gly Ala Thr Lys Tyr His Leu
 500 505 510

Asn Gly Arg Asn Ser Leu Val Asn Pro Gly Val Ala Met Ala Ser His
 515 520 525

Lys Glu Gly Glu Asp Arg Phe Phe Pro Leu Ser Gly Ser Leu Ile Phe
 530 535 540

Gly Lys Gln Gly Thr Gly Arg Asp Asn Val Asp Ala Asp Lys Leu Met
 545 550 555 560

Thr Asn Glu Glu Glu Ile Arg Pro Thr Asn Pro Val Ala Thr Glu Glu
565 570 575

Tyr Gly Ile Val Ala Thr Asn His Gln Ser Ala Gln Ala Gln Ala Gln
580 585 590

Thr Gly Trp Val Gln Asn Gln Gly Ile Leu Pro Gly Met Val Trp Gln
595 600 605

Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His
610 615 620

Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Leu
625 630 635 640

Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
645 650 655

Asn Pro Pro Glu Val Phe Thr Pro Ala Lys Phe Ala Ser Phe Ile Thr
660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln
675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn
690 695 700

Phe Tyr Lys Ser Asn Asn Val Glu Phe Ala Val Asn Thr Glu Gly Val
705 710 715 720

Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
725 730 735

<210> 95

<211> 736

<212> PRT

<213> Adeno-Associated Virus

<400> 95

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asn Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Ala Lys Lys Arg
130 135 140

Pro Val Glu Pro Ser Pro Gln Arg Ser Pro Asp Ser Ser Thr Gly Ile
145 150 155 160

Gly Lys Lys Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln
165 170 175

Thr Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro
180 185 190

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

Gly Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn
210 215 220

Ala Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val
225 230 235 240

Ile Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His
245 250 255

Leu Tyr Lys Gln Ile Ser Ser Glu Thr Ala Gly Ser Thr Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Lys Leu Arg Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Thr Asn Asp Gly Val Thr Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Ile Gln Val Phe Ser Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ser Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Glu Phe Ser Tyr Ser
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser
435 440 445

Lys Thr Ile Asn Gly Ser Gly Gln Asn Gln Gln Thr Leu Lys Phe Ser
450 455 460

Val Ala Gly Pro Ser Asn Met Ala Val Gln Gly Arg Asn Tyr Ile Pro
465 470 475 480

Gly Pro Ser Tyr Arg Gln Gln Arg Val Ser Thr Thr Val Thr Gln Asn
485 490 495

Asn Asn Ser Glu Phe Ala Trp Pro Gly Ala Ser Ser Trp Ala Leu Asn
500 505 510

Gly Arg Asn Ser Leu Met Asn Pro Gly Pro Ala Met Ala Ser His Lys
515 520 525

Glu Gly Glu Asp Arg Phe Phe Pro Leu Ser Gly Ser Leu Ile Phe Gly
530 535 540

Lys Gln Gly Thr Gly Arg Asp Asn Val Asp Ala Asp Lys Val Met Ile
545 550 555 560

Thr Asn Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu Ser
565 570 575

Tyr Gly Gln Val Ala Thr Asn His Gln Ser Ala Gln Ala Gln Ala Gln
580 585 590

Thr Gly Trp Val Gln Asn Gln Gly Ile Leu Pro Gly Met Val Trp Gln
595 600 605

Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His
610 615 620

Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Leu
625 630 635 640

Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
645 650 655

Asn Pro Pro Glu Val Phe Thr Pro Ala Lys Phe Ala Ser Phe Ile Thr
660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln
675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn
690 695 700

Phe Glu Lys Gln Thr Gly Val Asp Phe Ala Val Asp Ser Gln Gly Val
705 710 715 720

Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
725 730 735

<210> 96
<211> 736
<212> PRT
<213> Adeno-Associated Virus

<400> 96

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Thr Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

Ala Thr Pro Ala Ala Val Gly Pro Thr Thr Met Ala Ser Gly Gly Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ala
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Ser Thr Ser Gly Gly Ser Ser Asn Asp Asn
260 265 270

His Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Asp Asn Asn Gly Val Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Ser Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asp
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu

420

425

430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Asn
 435 440 445

Arg Thr Ile Asn Gly Ser Gly Gln Asn Gln Gln Thr Leu Lys Phe Ser
 450 455 460

Val Ala Gly Pro Ser Asn Met Ala Val Gln Pro Lys Asn Trp Leu Pro
 465 470 475 480

Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Val Thr Gln Asn
 485 490 495

Asn Asn Ser Glu Phe Ala Trp Pro Gly Ala Ser Lys Tyr Asn Leu Asn
 500 505 510

Gly Arg Glu Ser Ile Ile Asn Pro Gly Thr Ala Met Ala Ser His Lys
 515 520 525

Glu Gly Glu Asp Arg Phe Phe Pro Leu Ser Gly Ser Met Ile Phe Gly
 530 535 540

Lys Gln Gly Thr Gly Arg Asp Asn Val Asp Ala Asp Lys Val Met Ile
 545 550 555 560

Thr Asp Glu Glu Glu Ile Lys Ala Thr Asn Pro Val Ala Thr Glu Arg
 565 570 575

Phe Gly Thr Val Ala Thr Asn His Gln Ser Ala Gln Ala Gln Ala Gln
 580 585 590

Thr Gly Trp Val Gln Asn Gln Gly Ile Leu Pro Gly Met Val Trp Gln
 595 600 605

Asp Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His
 610 615 620

Thr Asp Gly His Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Leu
 625 630 635 640

Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
 645 650 655

Asn Pro Pro Ala Glu Phe Ser Ala Thr Lys Phe Ala Ser Phe Ile Thr
660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln
675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Val Gln Tyr Thr Ser Asn
690 695 700

Tyr Tyr Lys Ser Asn Asn Val Glu Phe Ala Val Asn Thr Glu Gly Leu
705 710 715 720

Tyr Thr Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Pro Leu
725 730 735

<210> 97
<211> 735
<212> PRT
<213> Adeno-Associated Virus

<400> 97

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Thr Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

Ala Thr Pro Ala Ala Val Gly Pro Thr Thr Met Ala Ser Gly Gly Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ala
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Ser Ala Ser Thr Gly Ala Ser Asn Asp Asn His
260 265 270

Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe
275 280 285

His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn
290 295 300

Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln
305 310 315 320

Val Lys Glu Val Thr Thr Asn Asp Gly Val Thr Thr Ile Ala Asn Asn
325 330 335

Leu Thr Ser Thr Val Gln Val Phe Ser Asp Ser Glu Tyr Gln Leu Pro
340 345 350

Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala
355 360 365

Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly
370 375 380

Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro
385 390 395 400

Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Thr Phe
405 410 415

Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp
420 425 430

Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Lys
435 440 445

Thr Ile Asn Gly Ser Gly Gln Asn Gln Gln Thr Leu Lys Phe Ser Val
450 455 460

Ala Gly Pro Ser Asn Met Ala Val Gln Gly Arg Asn Tyr Ile Pro Gly
465 470 475 480

Pro Ser Tyr Arg Gln Gln Arg Val Ser Thr Thr Val Thr Gln Asn Asn
485 490 495

Asn Ser Glu Phe Ala Trp Pro Gly Ala Ser Ser Trp Ala Leu Asn Gly
500 505 510

Arg Asn Ser Leu Met Asn Pro Gly Pro Ala Met Ala Ser His Lys Glu
515 520 525

Gly Glu Asp Arg Phe Phe Pro Leu Ser Gly Ser Leu Ile Phe Gly Lys
530 535 540

Gln Gly Thr Gly Arg Asp Asn Val Asp Ala Asp Lys Val Met Ile Thr
545 550 555 560

Asn Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu Ser Tyr
565 570 575

Gly Gln Val Ala Thr Asn His Gln Ser Ala Gln Ala Gln Ala Gln Thr
580 585 590

Gly Trp Val Gln Asn Gln Gly Ile Leu Pro Gly Met Val Trp Gln Asp
595 600 605

Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His Thr
610 615 620

Asp Gly His Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Leu Lys
625 630 635 640

His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala Asn
645 650 655

Pro Pro Ala Glu Phe Ser Ala Thr Lys Phe Ala Ser Phe Ile Thr Gln
660 665 670

Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln Lys
675 680 685

Glu Asn Ser Lys Arg Trp Asn Pro Glu Val Gln Tyr Thr Ser Asn Tyr
690 695 700

Ala Lys Ser Ala Asn Val Asp Phe Thr Val Asp Asn Asn Gly Leu Tyr
705 710 715 720

Thr Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Pro Leu
725 730 735

<210> 98

<211> 724

<212> PRT

<213> Adeno-Associated Virus

<400> 98

Met Ser Phe Phe Asp Trp Leu Gly Lys Gln Tyr Ala Gln Gly Ala Ala
1 5 10 15

Glu Phe Trp Asp Leu Lys Ser Gly Pro Pro Ala Pro Lys Lys Ala Arg
20 25 30

Lys Asp Gly Ser Ala Gly Phe Asn Phe Pro Gly His Lys Tyr Leu Gly
35 40 45

Pro Gly Asn Ser Leu Asp Arg Gly Asp Pro Val Asp Ala Asp Asp Ala

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

Asn Asn Asn Trp Gly Leu Arg Pro Lys Ser Leu Arg Phe Lys Ile Phe
290 295 300

Asn Ile Gln Val Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile
305 310 315 320

Ser Asn Asn Leu Thr Ser Thr Val Gln Val Phe Ala Asp Thr Glu Tyr
325 330 335

Gln Leu Pro Tyr Val Ile Gly Ser Ala His Glu Gly Cys Leu Pro Pro
340 345 350

Phe Pro Ala Asp Val Phe Met Leu Pro Gln Tyr Gly Tyr Cys Thr Leu
355 360 365

Asn Asn Gly Ser Gln Pro Thr Pro Arg Ser Ala Phe Tyr Cys Leu Glu
370 375 380

Tyr Phe Pro Ser Lys Met Leu Arg Thr Gly Asn Ser Phe Glu Phe Thr
385 390 395 400

Tyr Asn Phe Glu Lys Val Pro Phe His Ser Met Trp Ala His Asn Gln
405 410 415

Ser Leu Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr
420 425 430

Leu Asp Val Thr Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Phe
435 440 445

Thr Tyr Gln Lys Gly Val His Thr Asn Leu Pro Glu Gln Glu Arg Asn
450 455 460

Trp Leu Pro Gly Pro Gly Ile Arg Asn Gln Arg Val Ser Lys Thr Ser
465 470 475 480

Ala Asp Asn Asn Asn Ser Glu Tyr Ser Trp Gln Tyr Ser Asn Lys Tyr
485 490 495

Val Leu Glu Asn Gly Arg Ala Ser Lys Ile Ala Pro Gly Pro Ala Met
500 505 510

Ala Ser His Lys Asp Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val

515					520					525					
Leu	Ile	Phe	Gly	Lys	Gln	Gly	Ser	Glu	Lys	Thr	Asn	Val	Asp	Ile	Glu
530					535					540					
Lys	Val	Met	Ile	Thr	Arg	Glu	Thr	Glu	Ile	Asn	Ser	Thr	Asn	Pro	Leu
545					550					555					560
Ala	Gly	Gly	Ser	Leu	Gly	Ala	Val	Ser	Thr	Asn	Leu	Gln	Arg	Gly	Asn
				565					570					575	
Arg	Gln	Ala	Ala	Leu	Asp	His	Thr	Asn	Val	Met	Gly	Val	Phe	Pro	Gly
			580					585					590		
Ser	Val	Trp	Gln	Asp	Arg	Asp	Ile	Tyr	Leu	Gln	Gly	Gln	Ile	Trp	Ala
		595					600					605			
Lys	Ile	Pro	His	Thr	Asp	Gly	His	Phe	His	Pro	Ser	Pro	Leu	Met	Gly
	610					615					620				
Gly	Phe	Gly	Leu	Lys	Asn	Pro	Pro	Pro	Gln	Ile	Leu	Ile	Lys	Asn	Thr
625					630					635					640
Pro	Val	Pro	Ala	Asp	Pro	Pro	Thr	Glu	Phe	Asn	Ala	Asn	Lys	Ile	Ser
				645					650					655	
Ser	Phe	Ile	Thr	Gln	Tyr	Ser	Thr	Gly	Gln	Val	Thr	Val	Glu	Met	Glu
			660					665					670		
Trp	Glu	Leu	Gln	Lys	Glu	Thr	Ser	Lys	Arg	Trp	Asn	Pro	Glu	Ile	Gln
		675					680					685			
Tyr	Thr	Ser	Asn	Tyr	Asn	Lys	Ser	Val	Asn	Val	His	Phe	Ala	Pro	Asp
	690					695					700				
Asp	Val	Gly	Asn	Tyr	Lys	Glu	Phe	Arg	Ser	Ile	Gly	Thr	Arg	Tyr	Leu
705					710					715					720
Thr	Arg	Pro	Leu												

<210> 99
 <211> 723
 <212> PRT

<213> Adeno-Associated Virus

<400> 99

Met Ser Phe Phe Asp Trp Leu Gly Lys Gln Tyr Ala Gln Gly Ala Ala
1 5 10 15

Glu Phe Trp Asp Leu Lys Ser Gly Pro Pro Ala Pro Lys Lys Ala Arg
20 25 30

Lys Asp Gly Ser Ala Gly Phe Asn Phe Pro Gly His Lys Tyr Leu Gly
35 40 45

Pro Gly Asn Ser Leu Asp Arg Gly Asp Pro Val Asp Ala Asp Asp Ala
50 55 60

Ala Ala Gln Lys His Asp Gln Ser Tyr Gln Glu Gln Leu Glu Ala Gly
65 70 75 80

Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp Arg Glu Phe Gln Glu
85 90 95

Ala Leu Lys Asp Asp Thr Ser Phe Glu Gly Asn Leu Ala Arg Gly Leu
100 105 110

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

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

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

Asp Glu Glu Asp Arg Glu Phe Ala Ala Ala Ala Glu Thr Glu Thr
165 170 175

Gly Ser Ala Pro Pro Thr Gly Asn Leu Gly Pro Gly Thr Met Ala Gly
180 185 190

Gly Gly Ser Ala Pro Ile Asp Asp Gly Ser Tyr Gly Ala Asp Gly Val
195 200 205

Gly Asn Ala Ser Gly Asp Trp His Cys Asp Ser Thr Trp Leu Asp Asn
210 215 220

Cys Val Ile Thr Arg Thr Thr Arg Thr Trp Asn Leu Pro Thr Tyr Asn
225 230 235 240

Asn His Ile Tyr Lys Arg Leu Ser Ser Gln Ser Gly Ala Ser Asn Asp
245 250 255

Asn His Ser Tyr Phe Gly Phe Ser Thr Pro Trp Gly Tyr Phe Asp Phe
260 265 270

Asn Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile
275 280 285

Asn Asn Asn Trp Gly Leu Arg Pro Lys Ser Leu Arg Phe Lys Ile Phe
290 295 300

Asn Ile Gln Val Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile
305 310 315 320

Ser Asn Asn Leu Thr Ser Thr Val Gln Val Phe Ala Asp Thr Glu Tyr
325 330 335

Gln Leu Pro Tyr Val Ile Gly Ser Ala His Glu Gly Cys Leu Pro Pro
340 345 350

Phe Pro Ala Asp Val Phe Met Leu Pro Gln Tyr Gly Tyr Cys Thr Leu
355 360 365

Asn Asn Gly Ser Gln Pro Thr Pro Arg Ser Ala Phe Tyr Cys Leu Glu
370 375 380

Tyr Phe Pro Ser Lys Met Leu Arg Thr Gly Asn Ser Phe Glu Phe Thr
385 390 395 400

Tyr Asn Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln
405 410 415

Ser Leu Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr
420 425 430

Leu Ser Arg Thr Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu
435 440 445

Gln Phe Ser Gln Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn
450 455 460

Trp Leu Pro Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser
465 470 475 480

Ala Asp Asn Asn Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr
485 490 495

His Leu Asn Gly Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala
500 505 510

Ser His Lys Asp Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu
515 520 525

Ile Phe Gly Lys Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys
530 535 540

Val Met Ile Thr Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala
545 550 555 560

Thr Glu Gln Tyr Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Arg
565 570 575

Gln Ala Ala Thr Ala Asp Val Asn Thr Gln Gly Val Phe Pro Gly Ser
580 585 590

Val Trp Gln Asp Arg Asp Ile Tyr Leu Gln Gly Gln Ile Trp Ala Lys
595 600 605

Ile Pro His Thr Asp Gly His Phe His Pro Ser Pro Leu Met Gly Gly
610 615 620

Phe Gly Leu Lys Asn Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro
625 630 635 640

Val Pro Ala Asp Pro Pro Thr Glu Phe Asn Ala Asn Lys Ile Ser Ser
645 650 655

Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val Thr Val Glu Met Glu Trp
660 665 670

Glu Leu Gln Lys Glu Thr Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr
675 680 685

Thr Ser Asn Tyr Asn Lys Ser Val Asn Val His Phe Ala Pro Asp Asp
690 695 700

Val Gly Asn Tyr Lys Glu Phe Arg Ser Ile Gly Thr Arg Tyr Leu Thr
705 710 715 720

Arg Pro Leu

<210> 100
<211> 723
<212> PRT
<213> Adeno-Associated Virus

<400> 100

Met Ser Phe Phe Asp Trp Leu Gly Lys Gln Tyr Ala Gln Gly Ala Ala
1 5 10 15

Glu Phe Trp Asp Leu Lys Ser Gly Pro Pro Ala Pro Lys Lys Ala Arg
20 25 30

Lys Asp Gly Ser Ala Gly Phe Asn Phe Pro Gly His Lys Tyr Leu Gly
35 40 45

Pro Gly Asn Ser Leu Asp Arg Gly Asp Pro Val Asp Ala Asp Asp Ala
50 55 60

Ala Ala Gln Lys His Asp Gln Ser Tyr Gln Glu Gln Leu Glu Ala Gly
65 70 75 80

Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp Arg Glu Phe Gln Glu
85 90 95

Ala Leu Lys Asp Asp Thr Ser Phe Glu Gly Asn Leu Ala Arg Gly Leu
100 105 110

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

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

Glu Ser Gly Tyr Ser Ser Ser Gln Asp Lys Arg Pro Asn Leu Asp Val

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

Glu Tyr Phe Pro Ser Lys Met Leu Arg Thr Gly Asn Ser Phe Glu Phe
385 390 395 400

Thr Tyr Asn Phe Glu Lys Val Pro Phe His Ser Met Trp Ala His Asn
405 410 415

Gln Ser Leu Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr
420 425 430

Tyr Leu Ser Lys Thr Ile Asn Gly Ser Gly Gln Asn Gln Gln Thr Leu
435 440 445

Lys Phe Ser Val Ala Gly Pro Ser Asn Met Ala Val Gln Gly Arg Asn
450 455 460

Trp Leu Pro Gly Pro Gly Ile Arg Gln Gln Arg Val Ser Thr Thr Val
465 470 475 480

Thr Gln Asn Asn Asn Ser Glu Phe Ala Trp Pro Gly Ala Ser Ser Trp
485 490 495

Ala Leu Asn Gly Arg Ala Ser Lys Ile Ala Pro Gly Pro Ala Met Ala
500 505 510

Ser His Lys Glu Gly Glu Asp Arg Phe Phe Pro Leu Ser Gly Ser Leu
515 520 525

Ile Phe Gly Lys Gln Gly Thr Gly Arg Asp Asn Val Asp Ala Asp Lys
530 535 540

Val Asn Ile Thr Arg Glu Thr Glu Ile Asn Ser Thr Asn Pro Leu Ala
545 550 555 560

Gly Gly Ser Leu Gly Gln Val Ala Thr Asn His Gln Ser Ala Gln Ala
565 570 575

Gln Ala Gln Thr Gly Trp Val Gln Asn Gln Gly Val Phe Pro Gly Ser
580 585 590

Val Trp Gln Asp Arg Asp Ile Tyr Leu Gln Gly Gln Ile Trp Ala Lys
595 600 605

Ile Pro His Thr Asp Gly His Phe His Pro Ser Pro Leu Met Gly Gly

610		615		620
Phe Gly Leu Lys Asn Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro				
625		630		640
Val Pro Ala Asp Pro Pro Thr Glu Phe Asn Ala Asn Lys Ile Ser Ser				
		645		655
Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val Thr Val Glu Met Glu Trp				
		660		670
Glu Leu Gln Lys Glu Thr Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr				
		675		685
Thr Ser Asn Tyr Tyr Lys Ser Asn Asn Val Glu Phe Ala Val Asn Thr				
		690		700
Glu Gly Val Tyr Lys Glu Phe Arg Ser Ile Gly Thr Arg Tyr Leu Thr				
705		710		720

Arg Pro Leu

<210> 101
 <211> 723
 <212> PRT
 <213> Adeno-Associated Virus

<400> 101

Met Ser Phe Phe Asp Trp Leu Gly Lys Gln Tyr Ala Gln Gly Ala Ala
1 5 10 15
Glu Phe Trp Asp Leu Lys Ser Gly Pro Pro Ala Pro Lys Lys Ala Arg
20 25 30
Lys Asp Gly Ser Ala Gly Phe Asn Phe Pro Gly His Lys Tyr Leu Gly
35 40 45
Pro Gly Asn Ser Leu Asp Arg Gly Asp Pro Val Asp Ala Asp Asp Ala
50 55 60
Ala Ala Gln Lys His Asp Gln Ser Tyr Gln Glu Gln Leu Glu Ala Gly
65 70 75 80

Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp Arg Glu Phe Gln Glu
85 90 95

Ala Leu Lys Asp Asp Thr Ser Phe Glu Gly Asn Leu Ala Arg Gly Leu
100 105 110

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

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

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

Asp Glu Glu Asp Arg Glu Phe Ala Ala Ala Ala Ala Glu Thr Glu Thr
165 170 175

Gly Ser Ala Pro Pro Thr Gly Asn Leu Gly Pro Gly Thr Met Ala Gly
180 185 190

Gly Gly Ser Ala Pro Ile Asp Asp Gly Ser Tyr Gly Ala Asp Gly Val
195 200 205

Gly Asn Ala Ser Gly Asp Trp His Cys Asp Ser Thr Trp Leu Asp Asn
210 215 220

Cys Val Ile Thr Arg Thr Thr Arg Thr Trp Asn Leu Pro Thr Tyr Asn
225 230 235 240

Asn His Ile Tyr Lys Arg Leu Asn Gly Thr Thr Ser Gly Asp Gln Ser
245 250 255

Tyr Phe Gly Phe Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe
260 265 270

His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn
275 280 285

Trp Gly Leu Arg Pro Lys Ser Leu Arg Phe Lys Ile Phe Asn Ile Gln
290 295 300

Val Lys Glu Val Thr Thr Gln Asp Ser Thr Lys Ile Ile Ser Asn Asn
305 310 315 320

Leu Thr Ser Thr Val Gln Val Phe Ala Asp Thr Glu Tyr Gln Leu Pro
325 330 335

Tyr Val Ile Gly Ser Ala His Glu Gly Cys Leu Pro Pro Phe Pro Ala
340 345 350

Asp Val Phe Met Leu Pro Gln Tyr Gly Tyr Cys Thr Arg Gln Asp Gly
355 360 365

Asn Ser Asn Asn Pro Thr Pro Arg Ser Ala Phe Tyr Cys Leu Glu Tyr
370 375 380

Phe Pro Ser Lys Met Leu Arg Thr Gly Asn Ser Phe Glu Phe Thr Tyr
385 390 395 400

Asn Phe Glu Lys Val Pro Phe His Ser Met Trp Ala His Asn Gln Ser
405 410 415

Leu Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu
420 425 430

Ser Lys Thr Ile Asn Gly Ser Gly Gln Asn Gln Gln Thr Leu Lys Phe
435 440 445

Ser Val Ala Gly Pro Ser Asn Met Ala Val Gln Gly Arg Asn Tyr Ile
450 455 460

Pro Gly Pro Ser Tyr Arg Gln Gln Arg Val Ser Thr Thr Val Thr Gln
465 470 475 480

Asn Asn Asn Ser Glu Phe Ala Trp Pro Gly Ala Ser Ser Trp Ala Leu
485 490 495

Asn Gly Arg Asn Ser Leu Met Asn Pro Gly Pro Ala Met Ala Ser His
500 505 510

Lys Glu Gly Glu Asp Arg Phe Phe Pro Leu Ser Gly Ser Leu Ile Phe
515 520 525

Gly Lys Gln Gly Thr Gly Arg Asp Asn Val Asp Ala Asp Lys Val Met
530 535 540

Ile Thr Asn Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu
545 550 555 560

Ser Tyr Gly Gln Val Ala Thr Asn His Gln Ser Ala Gln Ala Gln Ala
565 570 575

Gln Thr Gly Trp Val Gln Asn Gln Gly Val Phe Pro Gly Ser Val Trp
580 585 590

Gln Asp Arg Asp Ile Tyr Leu Gln Gly Gln Ile Trp Ala Lys Ile Pro
595 600 605

His Thr Asp Gly His Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
610 615 620

Leu Lys Asn Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
625 630 635 640

Ala Asp Pro Pro Thr Glu Phe Asn Ala Asn Lys Ile Ser Ser Phe Ile
645 650 655

Thr Gln Tyr Ser Thr Gly Gln Val Thr Val Glu Met Glu Trp Glu Leu
660 665 670

Gln Lys Glu Thr Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Ser Asp
675 680 685

Asp Ser Ser Ser Thr Ser Gly Ser Ile Leu His Phe Ala Pro Asp Asp
690 695 700

Val Gly Asn Tyr Lys Glu Phe Arg Ser Ile Gly Thr Arg Tyr Leu Thr
705 710 715 720

Arg Pro Leu

<210> 102
<211> 723
<212> PRT
<213> Adeno-Associated Virus

<400> 102

Met Ser Phe Phe Asp Trp Leu Gly Lys Gln Tyr Ala Gln Gly Ala Ala
1 5 10 15

Glu Phe Trp Asp Leu Lys Ser Gly Pro Pro Ala Pro Lys Lys Ala Arg
20 25 30

Lys Asp Gly Ser Ala Gly Phe Asn Phe Pro Gly His Lys Tyr Leu Gly
35 40 45

Pro Gly Asn Ser Leu Asp Arg Gly Asp Pro Val Asp Ala Asp Asp Ala
50 55 60

Ala Ala Gln Lys His Asp Gln Ser Tyr Gln Glu Gln Leu Glu Ala Gly
65 70 75 80

Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp Arg Glu Phe Gln Glu
85 90 95

Ala Leu Lys Asp Asp Thr Ser Phe Glu Gly Asn Leu Ala Arg Gly Leu
100 105 110

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

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

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

Asp Glu Glu Asp Arg Glu Phe Ala Ala Ala Ala Glu Thr Glu Thr
165 170 175

Gly Ser Ala Pro Pro Thr Gly Asn Leu Gly Pro Gly Thr Met Ala Gly
180 185 190

Gly Gly Ser Ala Pro Ile Asp Asp Gly Ser Tyr Gly Ala Asp Gly Val
195 200 205

Gly Asn Ala Ser Gly Asp Trp His Cys Asp Ser Thr Trp Leu Asp Asn
210 215 220

Cys Val Ile Thr Arg Thr Thr Arg Thr Trp Asn Leu Pro Thr Tyr Asn
225 230 235 240

Asn His Ile Tyr Lys Gln Ile Ser Asn Ser Thr Ser Gly Gly Ser Ser

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

Thr Gln Asn Asn Asn Ser Glu Phe Ala Trp Pro Gly Ala Ser Ser Trp
485 490 495

Ala Leu Asn Gly Arg Asn Ser Leu Met Asn Pro Gly Pro Ala Met Ala
500 505 510

Ser His Lys Glu Gly Glu Asp Arg Phe Phe Pro Leu Ser Gly Ser Leu
515 520 525

Ile Phe Gly Lys Gln Gly Thr Gly Arg Asp Asn Val Asp Ala Asp Lys
530 535 540

Val Met Ile Thr Asn Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala
545 550 555 560

Thr Glu Ser Tyr Gly Gln Val Ala Thr Asn His Gln Ser Ala Gln Ala
565 570 575

Gln Ala Gln Thr Gly Trp Val Gln Asn Gln Gly Val Phe Pro Gly Ser
580 585 590

Val Trp Gln Asp Arg Asp Ile Tyr Leu Gln Gly Gln Ile Trp Ala Lys
595 600 605

Ile Pro His Thr Asp Gly His Phe His Pro Ser Pro Leu Met Gly Gly
610 615 620

Phe Gly Leu Lys Asn Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro
625 630 635 640

Val Pro Ala Asp Pro Pro Thr Glu Phe Asn Ala Asn Lys Ile Ser Ser
645 650 655

Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val Thr Val Glu Met Glu Trp
660 665 670

Glu Leu Gln Lys Glu Thr Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr
675 680 685

Thr Ser Asn Tyr Tyr Lys Ser Asn Asn Val Glu Phe Ala Val Asn Thr
690 695 700

Glu Gly Val Tyr Lys Glu Phe Arg Ser Ile Gly Thr Arg Tyr Leu Thr

705

710

715

720

Arg Pro Leu

<210> 103

<211> 724

<212> PRT

<213> Adeno-Associated Virus

<400> 103

Met Ser Phe Phe Asp Trp Leu Gly Lys Gln Tyr Ala Gln Gly Ala Ala
 1 5 10 15

Glu Phe Trp Asp Leu Lys Ser Gly Pro Pro Ala Pro Lys Lys Ala Arg
 20 25 30

Lys Asp Gly Ser Ala Gly Phe Asn Phe Pro Gly His Lys Tyr Leu Gly
 35 40 45

Pro Gly Asn Ser Leu Asp Arg Gly Asp Pro Val Asp Ala Asp Asp Ala
 50 55 60

Ala Ala Gln Lys His Asp Gln Ser Tyr Gln Glu Gln Leu Glu Ala Gly
 65 70 75 80

Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp Arg Glu Phe Gln Glu
 85 90 95

Ala Leu Lys Asp Asp Thr Ser Phe Glu Gly Asn Leu Ala Arg Gly Leu
 100 105 110

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

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

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

Asp Glu Glu Asp Arg Glu Phe Ala Ala Ala Ala Glu Thr Glu Thr
 165 170 175

Gly Ser Ala Pro Pro Thr Gly Asn Leu Gly Pro Gly Thr Met Ala Gly
180 185 190

Gly Gly Ser Ala Pro Ile Asp Asp Gly Ser Tyr Gly Ala Asp Gly Val
195 200 205

Gly Asn Ala Ser Gly Asp Trp His Cys Asp Ser Thr Trp Leu Asp Asn
210 215 220

Cys Val Ile Thr Arg Thr Thr Arg Thr Trp Asn Leu Pro Thr Tyr Asn
225 230 235 240

Asn His Ile Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ala Thr
245 250 255

Asn Asp Asn Thr Tyr Phe Gly Phe Ser Thr Pro Trp Gly Tyr Phe Asp
260 265 270

Phe Asn Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu
275 280 285

Ile Asn Asn Asn Trp Gly Leu Arg Pro Lys Ser Leu Arg Phe Lys Ile
290 295 300

Phe Asn Ile Gln Val Lys Glu Val Thr Gln Asn Glu Gly Thr Lys Ile
305 310 315 320

Ile Ser Asn Asn Leu Thr Ser Thr Val Gln Val Phe Ala Asp Thr Glu
325 330 335

Tyr Gln Leu Pro Tyr Val Ile Gly Ser Ala His Glu Gly Cys Leu Pro
340 345 350

Pro Phe Pro Ala Asp Val Phe Met Leu Pro Gln Tyr Gly Tyr Leu Thr
355 360 365

Leu Asn Asn Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu
370 375 380

Glu Tyr Phe Pro Ser Lys Met Leu Arg Thr Gly Asn Ser Phe Glu Phe
385 390 395 400

Thr Tyr Asn Phe Glu Lys Val Pro Phe His Ser Met Trp Ala His Asn
405 410 415

Gln Ser Leu Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr
420 425 430

Tyr Leu Ser Arg Thr Gln Thr Thr Gly Gly Thr Ala Asn Thr Gln Thr
435 440 445

Leu Gly Phe Ser Gln Gly Gly Pro Asn Thr Met Ala Asn Gln Ala Lys
450 455 460

Asn Trp Leu Pro Gly Pro Gly Ile Arg Gln Gln Arg Val Ser Thr Thr
465 470 475 480

Thr Gly Gln Asn Asn Asn Ser Asn Phe Ala Trp Thr Ala Gly Thr Lys
485 490 495

Tyr His Leu Asn Gly Arg Ala Ser Lys Ile Ala Pro Gly Pro Ala Met
500 505 510

Ala Thr His Lys Asp Asp Glu Glu Arg Phe Phe Pro Ser Asn Gly Ile
515 520 525

Leu Ile Phe Gly Lys Gln Asn Ala Ala Arg Asp Asn Ala Asp Tyr Ser
530 535 540

Asp Val Asn Ile Thr Arg Glu Thr Glu Ile Asn Ser Thr Asn Pro Leu
545 550 555 560

Ala Gly Gly Ser Leu Gly Ile Val Ala Asp Asn Leu Gln Gln Gln Asn
565 570 575

Thr Ala Pro Gln Ile Gly Thr Val Asn Ser Gln Gly Val Phe Pro Gly
580 585 590

Ser Val Trp Gln Asp Arg Asp Ile Tyr Leu Gln Gly Gln Ile Trp Ala
595 600 605

Lys Ile Pro His Thr Asp Gly His Phe His Pro Ser Pro Leu Met Gly
610 615 620

Gly Phe Gly Leu Lys Asn Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr
625 630 635 640

Pro Val Pro Ala Asp Pro Pro Thr Glu Phe Asn Ala Asn Lys Ile Ser
645 650 655

Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val Thr Val Glu Met Glu
660 665 670

Trp Glu Leu Gln Lys Glu Thr Ser Lys Arg Trp Asn Pro Glu Ile Gln
675 680 685

Tyr Thr Ser Asn Tyr Tyr Lys Ser Thr Ser Val Asp Phe Ala Val Asn
690 695 700

Thr Glu Gly Val Tyr Lys Glu Phe Arg Ser Ile Gly Thr Arg Tyr Leu
705 710 715 720

Thr Arg Pro Leu

<210> 104
<211> 724
<212> PRT
<213> Adeno-Associated Virus

<400> 104

Met Ser Phe Phe Asp Trp Leu Gly Lys Gln Tyr Ala Gln Gly Ala Ala
1 5 10 15

Glu Phe Trp Asp Leu Lys Ser Gly Pro Pro Ala Pro Lys Lys Ala Arg
20 25 30

Lys Asp Gly Ser Ala Gly Phe Asn Phe Pro Gly His Lys Tyr Leu Gly
35 40 45

Pro Gly Asn Ser Leu Asp Arg Gly Asp Pro Val Asp Ala Asp Asp Ala
50 55 60

Ala Ala Gln Lys His Asp Gln Ser Tyr Gln Glu Gln Leu Glu Ala Gly
65 70 75 80

Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp Arg Glu Phe Gln Glu
85 90 95

Ala Leu Lys Asp Asp Thr Ser Phe Glu Gly Asn Leu Ala Arg Gly Leu
100 105 110

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

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

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

Asp Glu Glu Asp Arg Glu Phe Ala Ala Ala Ala Ala Glu Thr Glu Thr
165 170 175

Gly Ser Ala Pro Pro Thr Gly Asn Leu Gly Pro Gly Thr Met Ala Gly
180 185 190

Gly Gly Ser Ala Pro Ile Asp Asp Gly Ser Tyr Gly Ala Asp Gly Val
195 200 205

Gly Asn Ala Ser Gly Asp Trp His Cys Asp Ser Thr Trp Leu Asp Asn
210 215 220

Cys Val Ile Thr Arg Thr Thr Arg Thr Trp Asn Leu Pro Thr Tyr Asn
225 230 235 240

Asn His Ile Tyr Lys Arg Leu Asn Gly Thr Thr Ser Gly Asp Gln Ser
245 250 255

Tyr Phe Gly Phe Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe
260 265 270

His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn
275 280 285

Trp Gly Leu Arg Pro Lys Ser Leu Arg Phe Lys Ile Phe Asn Ile Gln
290 295 300

Val Lys Glu Val Thr Thr Gln Asp Ser Thr Lys Ile Ile Ser Asn Asn
305 310 315 320

Leu Thr Ser Thr Val Gln Val Phe Ala Asp Thr Glu Tyr Gln Leu Pro
325 330 335

Tyr Val Ile Gly Ser Ala His Glu Gly Cys Leu Pro Pro Phe Pro Ala

340															
Asp	Val	Phe	Met	Leu	Pro	Gln	Tyr	Gly	Tyr	Cys	Thr	Arg	Gln	Asp	Gly
		355					360					365			
Asn	Ser	Asn	Asn	Pro	Thr	Pro	Arg	Ser	Ala	Phe	Tyr	Cys	Leu	Glu	Tyr
	370					375					380				
Phe	Pro	Ser	Lys	Met	Leu	Arg	Thr	Gly	Asn	Ser	Phe	Glu	Phe	Thr	Tyr
385					390					395					400
Asn	Phe	Glu	Lys	Val	Pro	Phe	His	Ser	Met	Trp	Ala	His	Asn	Gln	Ser
				405					410					415	
Leu	Asp	Arg	Leu	Met	Asn	Pro	Leu	Ile	Asp	Gln	Tyr	Leu	Tyr	Tyr	Leu
			420					425					430		
Ser	Arg	Thr	Gln	Thr	Thr	Gly	Gly	Thr	Ala	Asn	Thr	Gln	Thr	Leu	Gly
		435					440					445			
Phe	Ser	Gln	Gly	Gly	Pro	Asn	Thr	Met	Ala	Asn	Gln	Ala	Lys	Asn	Trp
	450					455					460				
Leu	Pro	Gly	Pro	Cys	Tyr	Arg	Gln	Gln	Arg	Val	Ser	Thr	Thr	Thr	Gly
465					470					475					480
Gln	Asn	Asn	Asn	Ser	Asn	Phe	Ala	Trp	Thr	Ala	Gly	Thr	Lys	Tyr	His
				485					490					495	
Leu	Asn	Gly	Arg	Asn	Ser	Leu	Ala	Asn	Pro	Gly	Ile	Ala	Met	Ala	Thr
			500					505					510		
His	Lys	Asp	Asp	Glu	Glu	Arg	Phe	Phe	Pro	Ser	Asn	Gly	Ile	Leu	Ile
		515					520					525			
Phe	Gly	Lys	Gln	Asn	Ala	Ala	Arg	Asp	Asn	Ala	Asp	Tyr	Ser	Asp	Val
	530					535					540				
Met	Leu	Thr	Ser	Glu	Glu	Glu	Ile	Lys	Thr	Thr	Asn	Pro	Val	Ala	Thr
545					550					555					560
Glu	Glu	Tyr	Gly	Ile	Val	Ala	Asp	Asn	Leu	Gln	Gln	Gln	Asn	Thr	Ala
				565					570					575	

Pro Gln Ile Gly Thr Val Asn Ser Gln Gly Val Phe Pro Gly Ser Val
580 585 590

Trp Gln Asp Arg Asp Ile Tyr Leu Gln Gly Gln Ile Trp Ala Lys Ile
595 600 605

Pro His Thr Asp Gly His Phe His Pro Ser Pro Leu Met Gly Gly Phe
610 615 620

Gly Leu Lys Asn Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val
625 630 635 640

Pro Ala Asp Pro Pro Thr Glu Phe Asn Ala Asn Lys Ile Ser Ser Phe
645 650 655

Ile Thr Gln Tyr Ser Thr Gly Gln Val Thr Val Glu Met Glu Trp Glu
660 665 670

Leu Gln Lys Glu Thr Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Ser
675 680 685

Asp Asp Ser Ser Ser Thr Ser Gly Ser Ile Leu His Phe Ala Pro Asp
690 695 700

Asp Val Gly Asn Tyr Lys Glu Phe Arg Ser Ile Gly Thr Arg Tyr Leu
705 710 715 720

Thr Arg Pro Leu

<210> 105

<211> 724

<212> PRT

<213> Adeno-Associated Virus

<400> 105

Met Ser Phe Phe Asp Trp Leu Gly Lys Gln Tyr Ala Gln Gly Ala Ala
1 5 10 15

Glu Phe Trp Asp Leu Lys Ser Gly Pro Pro Ala Pro Lys Lys Ala Arg
20 25 30

Lys Asp Gly Ser Ala Gly Phe Asn Phe Pro Gly His Lys Tyr Leu Gly
35 40 45

Pro Gly Asn Ser Leu Asp Arg Gly Asp Pro Val Asp Ala Asp Asp Ala
50 55 60

Ala Ala Gln Lys His Asp Gln Ser Tyr Gln Glu Gln Leu Glu Ala Gly
65 70 75 80

Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp Arg Glu Phe Gln Glu
85 90 95

Ala Leu Lys Asp Asp Thr Ser Phe Glu Gly Asn Leu Ala Arg Gly Leu
100 105 110

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

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

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

Asp Glu Glu Asp Arg Glu Phe Ala Ala Ala Ala Glu Thr Glu Thr
165 170 175

Gly Ser Ala Pro Pro Thr Gly Asn Leu Gly Pro Gly Thr Met Ala Gly
180 185 190

Gly Gly Ser Ala Pro Ile Asp Asp Gly Ser Tyr Gly Ala Asp Gly Val
195 200 205

Gly Asn Ala Ser Gly Asp Trp His Cys Asp Ser Thr Trp Leu Asp Asn
210 215 220

Cys Val Ile Thr Arg Thr Thr Arg Thr Trp Asn Leu Pro Thr Tyr Asn
225 230 235 240

Asn His Ile Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ala Thr
245 250 255

Asn Asp Asn Thr Tyr Phe Gly Phe Ser Thr Pro Trp Gly Tyr Phe Asp
260 265 270

Phe Asn Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu
275 280 285

Ile Asn Asn Asn Trp Gly Leu Arg Pro Lys Ser Leu Arg Phe Lys Ile
290 295 300

Phe Asn Ile Gln Val Lys Glu Val Thr Gln Asn Glu Gly Thr Lys Ile
305 310 315 320

Ile Ser Asn Asn Leu Thr Ser Thr Val Gln Val Phe Ala Asp Thr Glu
325 330 335

Tyr Gln Leu Pro Tyr Val Ile Gly Ser Ala His Glu Gly Cys Leu Pro
340 345 350

Pro Phe Pro Ala Asp Val Phe Met Leu Pro Gln Tyr Gly Tyr Leu Thr
355 360 365

Leu Asn Asn Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu
370 375 380

Glu Tyr Phe Pro Ser Lys Met Leu Arg Thr Gly Asn Ser Phe Glu Phe
385 390 395 400

Thr Tyr Asn Phe Glu Lys Val Pro Phe His Ser Met Trp Ala His Asn
405 410 415

Gln Ser Leu Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr
420 425 430

Tyr Leu Ser Arg Thr Gln Thr Thr Gly Gly Thr Ala Asn Thr Gln Thr
435 440 445

Leu Gly Phe Ser Gln Gly Gly Pro Asn Thr Met Ala Asn Gln Ala Lys
450 455 460

Asn Trp Leu Pro Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr
465 470 475 480

Thr Gly Gln Asn Asn Asn Ser Asn Phe Ala Trp Thr Ala Gly Thr Lys
485 490 495

Tyr His Leu Asn Gly Arg Asn Ser Leu Ala Asn Pro Gly Ile Ala Met
500 505 510

Ala Thr His Lys Asp Asp Glu Glu Arg Phe Phe Pro Ser Asn Gly Ile
515 520 525

Leu Ile Phe Gly Lys Gln Asn Ala Ala Arg Asp Asn Ala Asp Tyr Ser
530 535 540

Asp Val Met Leu Thr Ser Glu Glu Glu Ile Lys Thr Thr Asn Pro Val
545 550 555 560

Ala Thr Glu Glu Tyr Gly Ile Val Ala Asp Asn Leu Gln Gln Gln Asn
565 570 575

Thr Ala Pro Gln Ile Gly Thr Val Asn Ser Gln Gly Val Phe Pro Gly
580 585 590

Ser Val Trp Gln Asp Arg Asp Ile Tyr Leu Gln Gly Gln Ile Trp Ala
595 600 605

Lys Ile Pro His Thr Asp Gly His Phe His Pro Ser Pro Leu Met Gly
610 615 620

Gly Phe Gly Leu Lys Asn Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr
625 630 635 640

Pro Val Pro Ala Asp Pro Pro Thr Glu Phe Asn Ala Asn Lys Ile Ser
645 650 655

Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val Thr Val Glu Met Glu
660 665 670

Trp Glu Leu Gln Lys Glu Thr Ser Lys Arg Trp Asn Pro Glu Ile Gln
675 680 685

Tyr Thr Ser Asn Tyr Tyr Lys Ser Thr Ser Val Asp Phe Ala Val Asn
690 695 700

Thr Glu Gly Val Tyr Lys Glu Phe Arg Ser Ile Gly Thr Arg Tyr Leu
705 710 715 720

Thr Arg Pro Leu

<210> 106
<211> 729
<212> PRT
<213> Adeno-Associated Virus

<400> 106

Met Thr Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser Glu
1 5 10 15

Gly Val Arg Glu Trp Trp Ala Leu Gln Pro Gly Ala Pro Lys Pro Lys
20 25 30

Ala Asn Gln Gln His Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Lys Tyr Leu Gly Pro Gly Asn Gly Leu Asp Lys Gly Glu Pro Val
50 55 60

Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp Gln
65 70 75 80

Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
85 90 95

Ala Glu Phe Gln Gln Arg Leu Gln Gly Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro Leu
115 120 125

Gly Leu Val Glu Gln Ala Gly Glu Thr Ala Pro Gly Lys Lys Arg Pro
130 135 140

Leu Ile Glu Ser Pro Gln Gln Pro Asp Ser Ser Thr Gly Ile Gly Lys
145 150 155 160

Lys Gly Lys Gln Pro Ala Lys Lys Lys Leu Val Phe Glu Asp Glu Thr
165 170 175

Gly Ala Gly Asp Gly Pro Pro Glu Gly Ser Thr Ser Gly Ala Met Ser
180 185 190

Asp Asp Ser Glu Met Arg Ala Ala Ala Gly Gly Ala Ala Val Glu Gly
195 200 205

Gly Gln Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asp Trp His Cys
210 215 220

Asp Ser Thr Trp Ser Glu Gly His Val Thr Thr Thr Ser Thr Arg Thr
225 230 235 240

Trp Val Leu Pro Thr Tyr Asn Asn His Leu Tyr Lys Gln Ile Ser Ser
245 250 255

Gln Ser Gly Ala Ser Asn Asp Asn His Tyr Phe Gly Phe Ser Thr Pro
260 265 270

Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Cys His Phe Ser Pro Arg
275 280 285

Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp Gly Met Arg Pro Lys Ala
290 295 300

Met Arg Val Lys Ile Phe Asn Ile Gln Val Lys Glu Val Thr Gln Asn
305 310 315 320

Asp Gly Thr Thr Thr Val Ala Asn Asn Leu Thr Ser Thr Val Gln Ile
325 330 335

Phe Ala Asp Ser Ser Tyr Glu Leu Pro Tyr Val Met Asp Ala Gly Gln
340 345 350

Glu Gly Ser Leu Pro Pro Phe Pro Asn Asp Val Phe Met Val Pro Gln
355 360 365

Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser Gln Ala Val Gly Arg Ser
370 375 380

Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser Gln Met Leu Arg Thr Gly
385 390 395 400

Asn Asn Phe Glu Ile Thr Tyr Ser Phe Glu Lys Val Pro Phe His Ser
405 410 415

Met Tyr Ala His Ser Gln Ser Leu Asp Arg Leu Met Asn Pro Leu Ile
420 425 430

Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr Asn Thr Pro Ser Gly Thr

435		440		445											
Thr	Thr	Gln	Ser	Arg	Leu	Gln	Phe	Ser	Gln	Ala	Gly	Ala	Ser	Asp	Ile
450						455					460				
Arg	Asp	Gln	Ser	Arg	Asn	Trp	Leu	Pro	Gly	Pro	Ser	Ile	Arg	Gln	Gln
465					470					475					480
Arg	Val	Ser	Lys	Thr	Ser	Ala	Asp	Asn	Asn	Asn	Ser	Glu	Tyr	Ser	Trp
				485					490					495	
Thr	Gly	Ala	Thr	Lys	Tyr	His	Leu	Asn	Gly	Arg	Trp	Ser	Ala	Leu	Thr
			500					505					510		
Pro	Gly	Pro	Pro	Met	Ala	Thr	His	Lys	Asp	Asp	Glu	Glu	Lys	Phe	Phe
		515					520					525			
Pro	Gln	Ser	Gly	Val	Leu	Ile	Phe	Gly	Lys	Gln	Gly	Ser	Glu	Lys	Thr
	530					535					540				
Asn	Val	Asp	Ile	Glu	Lys	Leu	Ile	Phe	Thr	Ser	Glu	Glu	Glu	Leu	Ala
545					550					555					560
Ala	Thr	Asn	Ala	Thr	Asp	Thr	Asp	Met	Trp	Gly	Ser	Val	Ser	Thr	Asn
				565					570					575	
Leu	Gln	Arg	Gly	Asn	Arg	Gln	Ala	Ala	Thr	Ala	Asp	Val	Asn	Thr	Gln
			580					585					590		
Gly	Ala	Val	Pro	Gly	Met	Val	Trp	Gln	Asn	Arg	Asp	Ile	Tyr	Tyr	Gln
		595					600					605			
Gly	Pro	Ile	Trp	Ala	Lys	Ile	Pro	His	Thr	Asp	Gly	His	Phe	His	Pro
	610					615					620				
Ser	Pro	Leu	Ile	Gly	Gly	Phe	Gly	Leu	Lys	His	Pro	Pro	Pro	Gln	Ile
625					630					635					640
Phe	Ile	Lys	Asn	Thr	Pro	Val	Pro	Ala	Asn	Pro	Ala	Thr	Thr	Phe	Ser
				645					650					655	
Ser	Thr	Pro	Val	Asn	Ser	Phe	Ile	Thr	Gln	Tyr	Ser	Thr	Gly	Gln	Val
			660					665					670		

Ser Val Gln Ile Asp Trp Glu Ile Gln Lys Glu Arg Ser Lys Arg Trp
675 680 685

Asn Pro Glu Val Gln Phe Thr Ser Asn Tyr Asn Lys Ser Val Asn Val
690 695 700

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Thr Glu Pro Arg Ala Ile
705 710 715 720

Gly Thr Arg Tyr Leu Thr His His Leu
725

<210> 107

<211> 729

<212> PRT

<213> Adeno-Associated Virus

<400> 107

Met Thr Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser Glu
1 5 10 15

Gly Val Arg Glu Trp Trp Ala Leu Gln Pro Gly Ala Pro Lys Pro Lys
20 25 30

Ala Asn Gln Gln His Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Lys Tyr Leu Gly Pro Gly Asn Gly Leu Asp Lys Gly Glu Pro Val
50 55 60

Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp Gln
65 70 75 80

Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
85 90 95

Ala Glu Phe Gln Gln Arg Leu Gln Gly Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro Leu
115 120 125

Gly Leu Val Glu Gln Ala Gly Glu Thr Ala Pro Gly Lys Lys Arg Pro
130 135 140

Leu Ile Glu Ser Pro Gln Gln Pro Asp Ser Ser Thr Gly Ile Gly Lys
145 150 155 160

Lys Gly Lys Gln Pro Ala Lys Lys Lys Leu Val Phe Glu Asp Glu Thr
165 170 175

Gly Ala Gly Asp Gly Pro Pro Glu Gly Ser Thr Ser Gly Ala Met Ser
180 185 190

Asp Asp Ser Glu Met Arg Ala Ala Ala Gly Gly Ala Ala Val Glu Gly
195 200 205

Gly Gln Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asp Trp His Cys
210 215 220

Asp Ser Thr Trp Ser Glu Gly His Val Thr Thr Thr Ser Thr Arg Thr
225 230 235 240

Trp Val Leu Pro Thr Tyr Asn Asn His Leu Tyr Lys Arg Leu Gly Glu
245 250 255

Ser Leu Gln Ser Asn Thr Tyr Asn Gly Phe Ser Thr Pro Trp Gly Tyr
260 265 270

Phe Asp Phe Asn Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln
275 280 285

Arg Leu Ile Asn Asn Asn Trp Gly Met Arg Pro Lys Ala Met Arg Val
290 295 300

Lys Ile Phe Asn Ile Gln Val Lys Glu Val Thr Thr Ser Asn Gly Glu
305 310 315 320

Thr Thr Val Ala Asn Asn Leu Thr Ser Thr Val Gln Ile Phe Ala Asp
325 330 335

Ser Ser Tyr Glu Leu Pro Tyr Val Met Asp Ala Gly Gln Glu Gly Ser
340 345 350

Leu Pro Pro Phe Pro Asn Asp Val Phe Met Val Pro Gln Tyr Gly Tyr
355 360 365

Cys Gly Leu Val Thr Gly Asn Thr Ser Gln Gln Gln Thr Asp Arg Asn
370 375 380

Ala Phe Tyr Cys Leu Glu Tyr Phe Pro Ser Gln Met Leu Arg Thr Gly
385 390 395 400

Asn Asn Phe Glu Ile Thr Tyr Ser Phe Glu Lys Val Pro Phe His Ser
405 410 415

Met Tyr Ala His Ser Gln Ser Leu Asp Arg Leu Met Asn Pro Leu Ile
420 425 430

Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr Asn Thr Pro Ser Gly Thr
435 440 445

Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln Ala Gly Ala Ser Asp Ile
450 455 460

Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly Pro Cys Tyr Arg Gln Gln
465 470 475 480

Arg Val Ser Lys Thr Ser Ala Asp Asn Asn Asn Ser Glu Tyr Ser Trp
485 490 495

Thr Gly Ala Thr Lys Tyr His Leu Asn Gly Arg Asp Ser Leu Val Asn
500 505 510

Pro Gly Pro Ala Met Ala Ser His Lys Asp Asp Glu Glu Lys Phe Phe
515 520 525

Pro Gln Ser Gly Val Leu Ile Phe Gly Lys Gln Gly Ser Glu Lys Thr
530 535 540

Asn Val Asp Ile Glu Lys Val Met Ile Thr Asp Glu Glu Glu Ile Arg
545 550 555 560

Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr Gly Ser Val Ser Thr Asn
565 570 575

Leu Gln Arg Gly Asn Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
580 585 590

Gly Ala Val Pro Gly Met Val Trp Gln Asn Arg Asp Ile Tyr Tyr Gln
595 600 605

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
610 615 620

Ser Pro Leu Ile Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
625 630 635 640

Phe Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ala Thr Thr Phe Ser
645 650 655

Ser Thr Pro Val Asn Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
660 665 670

Ser Val Gln Ile Asp Trp Glu Ile Gln Lys Glu Arg Ser Lys Arg Trp
675 680 685

Asn Pro Glu Val Gln Phe Thr Ser Asn Tyr Gly Gln Gln Asn Ser Leu
690 695 700

Leu Trp Ala Pro Asp Ala Ala Gly Lys Tyr Thr Glu Pro Arg Ala Ile
705 710 715 720

Gly Thr Arg Tyr Leu Thr His His Leu
725

<210> 108

<211> 729

<212> PRT

<213> Adeno-Associated Virus

<400> 108

Met Thr Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser Glu
1 5 10 15

Gly Val Arg Glu Trp Trp Ala Leu Gln Pro Gly Ala Pro Lys Pro Lys
20 25 30

Ala Asn Gln Gln His Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Lys Tyr Leu Gly Pro Gly Asn Gly Leu Asp Lys Gly Glu Pro Val
50 55 60

Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp Gln

65

70

75

80

Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
85 90 95

Ala Glu Phe Gln Gln Arg Leu Gln Gly Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro Leu
115 120 125

Gly Leu Val Glu Gln Ala Gly Glu Thr Ala Pro Gly Lys Lys Arg Pro
130 135 140

Leu Ile Glu Ser Pro Gln Gln Pro Asp Ser Ser Thr Gly Ile Gly Lys
145 150 155 160

Lys Gly Lys Gln Pro Ala Lys Lys Lys Leu Val Phe Glu Asp Glu Thr
165 170 175

Gly Ala Gly Asp Gly Pro Pro Glu Gly Ser Thr Ser Gly Ala Met Ser
180 185 190

Asp Asp Ser Glu Met Arg Ala Ala Ala Gly Gly Ala Ala Val Glu Gly
195 200 205

Gly Gln Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asp Trp His Cys
210 215 220

Asp Ser Thr Trp Ser Glu Gly His Val Thr Thr Thr Ser Thr Arg Thr
225 230 235 240

Trp Val Leu Pro Thr Tyr Asn Asn His Leu Tyr Lys Gln Ile Ser Ser
245 250 255

Gln Ser Gly Ala Ser Asn Asp Asn His Tyr Phe Gly Phe Ser Thr Pro
260 265 270

Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Cys His Phe Ser Pro Arg
275 280 285

Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp Gly Met Arg Pro Lys Ala
290 295 300

Met Arg Val Lys Ile Phe Asn Ile Gln Val Lys Glu Val Thr Gln Asn
305 310 315 320

Asp Gly Thr Thr Thr Val Ala Asn Asn Leu Thr Ser Thr Val Gln Ile
325 330 335

Phe Ala Asp Ser Ser Tyr Glu Leu Pro Tyr Val Met Asp Ala Gly Gln
340 345 350

Glu Gly Ser Leu Pro Pro Phe Pro Asn Asp Val Phe Met Val Pro Gln
355 360 365

Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser Gln Ala Val Gly Arg Ser
370 375 380

Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser Gln Met Leu Arg Thr Gly
385 390 395 400

Asn Asn Phe Glu Ile Thr Tyr Ser Phe Glu Lys Val Pro Phe His Ser
405 410 415

Met Tyr Ala His Ser Gln Ser Leu Asp Arg Leu Met Asn Pro Leu Ile
420 425 430

Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr Asn Thr Pro Ser Gly Thr
435 440 445

Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln Ala Gly Ala Ser Asp Ile
450 455 460

Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly Pro Cys Tyr Arg Gln Gln
465 470 475 480

Arg Val Ser Lys Thr Ser Ala Asp Asn Asn Asn Ser Glu Tyr Ser Trp
485 490 495

Thr Gly Ala Thr Lys Tyr His Leu Asn Gly Arg Asp Ser Leu Val Asn
500 505 510

Pro Gly Pro Ala Met Ala Ser His Lys Asp Asp Glu Glu Lys Phe Phe
515 520 525

Pro Gln Ser Gly Val Leu Ile Phe Gly Lys Gln Gly Ser Glu Lys Thr

530		535		540
Asn Val Asp Ile Glu Lys Val Met Ile Thr Asp Glu Glu Glu Ile Arg				
545		550		555
Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr Gly Ser Val Ser Thr Asn				
		565		570
				575
Leu Gln Arg Gly Asn Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln				
		580		585
				590
Gly Ala Val Pro Gly Met Val Trp Gln Asn Arg Asp Ile Tyr Tyr Gln				
		595		600
				605
Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro				
		610		615
				620
Ser Pro Leu Ile Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile				
		625		630
				635
Phe Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ala Thr Thr Phe Ser				
		645		650
				655
Ser Thr Pro Val Asn Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val				
		660		665
				670
Ser Val Gln Ile Asp Trp Glu Ile Gln Lys Glu Arg Ser Lys Arg Trp				
		675		680
				685
Asn Pro Glu Val Gln Phe Thr Ser Asn Tyr Asn Lys Ser Val Asn Val				
		690		695
				700
Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Thr Glu Pro Arg Ala Ile				
		705		710
				715
				720
Gly Thr Arg Tyr Leu Thr His His Leu				
		725		

<210> 109
 <211> 731
 <212> PRT
 <213> Adeno-Associated Virus
 <400> 109

Met	Thr	Asp	Gly	Tyr	Leu	Pro	Asp	Trp	Leu	Glu	Asp	Asn	Leu	Ser	Glu			
1				5					10					15				
Gly	Val	Arg	Glu	Trp	Trp	Ala	Leu	Gln	Pro	Gly	Ala	Pro	Lys	Pro	Lys			
			20					25					30					
Ala	Asn	Gln	Gln	His	Gln	Asp	Asn	Ala	Arg	Gly	Leu	Val	Leu	Pro	Gly			
		35					40					45						
Tyr	Lys	Tyr	Leu	Gly	Pro	Gly	Asn	Gly	Leu	Asp	Lys	Gly	Glu	Pro	Val			
	50					55					60							
Asn	Ala	Ala	Asp	Ala	Ala	Ala	Leu	Glu	His	Asp	Lys	Ala	Tyr	Asp	Gln			
65					70					75					80			
Gln	Leu	Lys	Ala	Gly	Asp	Asn	Pro	Tyr	Leu	Lys	Tyr	Asn	His	Ala	Asp			
				85					90					95				
Ala	Glu	Phe	Gln	Gln	Arg	Leu	Gln	Gly	Asp	Thr	Ser	Phe	Gly	Gly	Asn			
			100					105					110					
Leu	Gly	Arg	Ala	Val	Phe	Gln	Ala	Lys	Lys	Arg	Val	Leu	Glu	Pro	Leu			
		115					120					125						
Gly	Leu	Val	Glu	Gln	Ala	Gly	Glu	Thr	Ala	Pro	Gly	Lys	Lys	Arg	Pro			
	130					135					140							
Leu	Ile	Glu	Ser	Pro	Gln	Gln	Pro	Asp	Ser	Ser	Thr	Gly	Ile	Gly	Lys			
145					150					155					160			
Lys	Gly	Lys	Gln	Pro	Ala	Lys	Lys	Lys	Leu	Val	Phe	Glu	Asp	Glu	Thr			
				165					170					175				
Gly	Ala	Gly	Asp	Gly	Pro	Pro	Glu	Gly	Ser	Thr	Ser	Gly	Ala	Met	Ser			
			180					185					190					
Asp	Asp	Ser	Glu	Met	Arg	Ala	Ala	Ala	Gly	Gly	Ala	Ala	Val	Glu	Gly			
		195					200					205						
Gly	Gln	Gly	Ala	Asp	Gly	Val	Gly	Asn	Ala	Ser	Gly	Asp	Trp	His	Cys			
	210					215					220							
Asp	Ser	Thr	Trp	Ser	Glu	Gly	His	Val	Thr	Thr	Thr	Ser	Thr	Arg	Thr			
225					230					235					240			

Trp Val Leu Pro Thr Tyr Asn Asn His Leu Tyr Lys Gln Ile Ser Asn
245 250 255

Gly Thr Ser Gly Gly Ala Thr Asn Asp Asn Thr Tyr Phe Gly Phe Ser
260 265 270

Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Cys His Phe Ser
275 280 285

Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp Gly Met Arg Pro
290 295 300

Lys Ala Met Arg Val Lys Ile Phe Asn Ile Gln Val Lys Glu Val Thr
305 310 315 320

Gln Asn Glu Gly Thr Lys Thr Val Ala Asn Asn Leu Thr Ser Thr Val
325 330 335

Gln Ile Phe Ala Asp Ser Ser Tyr Glu Leu Pro Tyr Val Met Asp Ala
340 345 350

Gly Gln Glu Gly Ser Leu Pro Pro Phe Pro Asn Asp Val Phe Met Val
355 360 365

Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser Gln Ala Val Gly
370 375 380

Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser Gln Met Leu Arg
385 390 395 400

Thr Gly Asn Asn Phe Glu Ile Thr Tyr Ser Phe Glu Lys Val Pro Phe
405 410 415

His Ser Met Tyr Ala His Ser Gln Ser Leu Asp Arg Leu Met Asn Pro
420 425 430

Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr Gln Thr Thr Gly
435 440 445

Gly Thr Ala Asn Thr Gln Thr Leu Gly Phe Ser Gln Gly Gly Pro Asn
450 455 460

Thr Met Ala Asn Gln Ala Lys Asn Trp Leu Pro Gly Pro Ser Ile Arg
465 470 475 480

Gln Gln Arg Val Ser Thr Thr Thr Gly Gln Asn Asn Asn Ser Asn Phe
485 490 495

Ala Trp Thr Ala Gly Thr Lys Tyr His Leu Asn Gly Arg Trp Ser Ala
500 505 510

Leu Thr Pro Gly Pro Pro Met Ala Thr His Lys Asp Asp Glu Glu Arg
515 520 525

Phe Phe Pro Ser Asn Gly Ile Leu Ile Phe Gly Lys Gln Asn Ala Ala
530 535 540

Arg Asp Asn Ala Asp Tyr Ser Asp Leu Ile Phe Thr Ser Glu Glu Glu
545 550 555 560

Leu Ala Ala Thr Asn Ala Thr Asp Thr Asp Met Trp Gly Ile Val Ala
565 570 575

Asp Asn Leu Gln Gln Gln Asn Thr Ala Pro Gln Ile Gly Thr Val Asn
580 585 590

Ser Gln Gly Ala Val Pro Gly Met Val Trp Gln Asn Arg Asp Ile Tyr
595 600 605

Tyr Gln Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe
610 615 620

His Pro Ser Pro Leu Ile Gly Gly Phe Gly Leu Lys His Pro Pro Pro
625 630 635 640

Gln Ile Phe Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ala Thr Thr
645 650 655

Phe Ser Ser Thr Pro Val Asn Ser Phe Ile Thr Gln Tyr Ser Thr Gly
660 665 670

Gln Val Ser Val Gln Ile Asp Trp Glu Ile Gln Lys Glu Arg Ser Lys
675 680 685

Arg Trp Asn Pro Glu Val Gln Phe Thr Ser Asn Tyr Tyr Lys Ser Thr
690 695 700

Ser Val Asp Phe Ala Val Asn Thr Glu Gly Val Tyr Thr Glu Pro Arg
705 710 715 720

Ala Ile Gly Thr Arg Tyr Leu Thr His His Leu
725 730

<210> 110

<211> 729

<212> PRT

<213> Adeno-Associated Virus

<400> 110

Met Thr Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser Glu
1 5 10 15

Gly Val Arg Glu Trp Trp Ala Leu Gln Pro Gly Ala Pro Lys Pro Lys
20 25 30

Ala Asn Gln Gln His Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Lys Tyr Leu Gly Pro Gly Asn Gly Leu Asp Lys Gly Glu Pro Val
50 55 60

Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp Gln
65 70 75 80

Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
85 90 95

Ala Glu Phe Gln Gln Arg Leu Gln Gly Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro Leu
115 120 125

Gly Leu Val Glu Gln Ala Gly Glu Thr Ala Pro Gly Lys Lys Arg Pro
130 135 140

Leu Ile Glu Ser Pro Gln Gln Pro Asp Ser Ser Thr Gly Ile Gly Lys
145 150 155 160

Lys Gly Lys Gln Pro Ala Lys Lys Lys Leu Val Phe Glu Asp Glu Thr

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

Asn Asn Phe Glu Ile Thr Tyr Ser Phe Glu Lys Val Pro Phe His Ser
405 410 415

Met Tyr Ala His Ser Gln Ser Leu Asp Arg Leu Met Asn Pro Leu Ile
420 425 430

Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr Gln Thr Thr Gly Gly Thr
435 440 445

Ala Asn Thr Gln Thr Leu Gly Phe Ser Gln Gly Gly Pro Asn Thr Met
450 455 460

Ala Asn Gln Ala Lys Asn Trp Leu Pro Gly Pro Cys Tyr Arg Gln Gln
465 470 475 480

Arg Val Ser Thr Thr Thr Gly Gln Asn Asn Asn Ser Asn Phe Ala Trp
485 490 495

Thr Ala Gly Thr Lys Tyr His Leu Asn Gly Arg Asn Ser Leu Ala Asn
500 505 510

Pro Gly Ile Ala Met Ala Thr His Lys Asp Asp Glu Glu Arg Phe Phe
515 520 525

Pro Ser Asn Gly Ile Leu Ile Phe Gly Lys Gln Asn Ala Ala Arg Asp
530 535 540

Asn Ala Asp Tyr Ser Asp Val Met Leu Thr Ser Glu Glu Glu Ile Lys
545 550 555 560

Thr Thr Asn Pro Val Ala Thr Glu Glu Tyr Gly Ile Val Ala Asp Asn
565 570 575

Leu Gln Gln Gln Asn Thr Ala Pro Gln Ile Gly Thr Val Asn Ser Gln
580 585 590

Gly Ala Val Pro Gly Met Val Trp Gln Asn Arg Asp Ile Tyr Tyr Gln
595 600 605

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
610 615 620

Ser Pro Leu Ile Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile

625		630		635		640									
Phe	Ile	Lys	Asn	Thr	Pro	Val	Pro	Ala	Asn	Pro	Ala	Thr	Thr	Phe	Ser
			645						650					655	
Ser	Thr	Pro	Val	Asn	Ser	Phe	Ile	Thr	Gln	Tyr	Ser	Thr	Gly	Gln	Val
			660					665					670		
Ser	Val	Gln	Ile	Asp	Trp	Glu	Ile	Gln	Lys	Glu	Arg	Ser	Lys	Arg	Trp
		675					680					685			
Asn	Pro	Glu	Val	Gln	Phe	Thr	Ser	Asn	Tyr	Gly	Gln	Gln	Asn	Ser	Leu
	690					695					700				
Leu	Trp	Ala	Pro	Asp	Ala	Ala	Gly	Lys	Tyr	Thr	Glu	Pro	Arg	Ala	Ile
705					710					715					720
Gly	Thr	Arg	Tyr	Leu	Thr	His	His	Leu							
				725											
<210>	111														
<211>	731														
<212>	PRT														
<213>	Adeno-Associated Virus														
<400>	111														
Met	Thr	Asp	Gly	Tyr	Leu	Pro	Asp	Trp	Leu	Glu	Asp	Asn	Leu	Ser	Glu
1				5					10				15		
Gly	Val	Arg	Glu	Trp	Trp	Ala	Leu	Gln	Pro	Gly	Ala	Pro	Lys	Pro	Lys
			20					25					30		
Ala	Asn	Gln	Gln	His	Gln	Asp	Asn	Ala	Arg	Gly	Leu	Val	Leu	Pro	Gly
		35					40					45			
Tyr	Lys	Tyr	Leu	Gly	Pro	Gly	Asn	Gly	Leu	Asp	Lys	Gly	Glu	Pro	Val
	50					55					60				
Asn	Ala	Ala	Asp	Ala	Ala	Ala	Leu	Glu	His	Asp	Lys	Ala	Tyr	Asp	Gln
65					70					75					80
Gln	Leu	Lys	Ala	Gly	Asp	Asn	Pro	Tyr	Leu	Lys	Tyr	Asn	His	Ala	Asp
				85					90					95	

Ala Glu Phe Gln Gln Arg Leu Gln Gly Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro Leu
115 120 125

Gly Leu Val Glu Gln Ala Gly Glu Thr Ala Pro Gly Lys Lys Arg Pro
130 135 140

Leu Ile Glu Ser Pro Gln Gln Pro Asp Ser Ser Thr Gly Ile Gly Lys
145 150 155 160

Lys Gly Lys Gln Pro Ala Lys Lys Lys Leu Val Phe Glu Asp Glu Thr
165 170 175

Gly Ala Gly Asp Gly Pro Pro Glu Gly Ser Thr Ser Gly Ala Met Ser
180 185 190

Asp Asp Ser Glu Met Arg Ala Ala Ala Gly Gly Ala Ala Val Glu Gly
195 200 205

Gly Gln Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asp Trp His Cys
210 215 220

Asp Ser Thr Trp Ser Glu Gly His Val Thr Thr Thr Ser Thr Arg Thr
225 230 235 240

Trp Val Leu Pro Thr Tyr Asn Asn His Leu Tyr Lys Gln Ile Ser Asn
245 250 255

Gly Thr Ser Gly Gly Ala Thr Asn Asp Asn Thr Tyr Phe Gly Phe Ser
260 265 270

Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Cys His Phe Ser
275 280 285

Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp Gly Met Arg Pro
290 295 300

Lys Ala Met Arg Val Lys Ile Phe Asn Ile Gln Val Lys Glu Val Thr
305 310 315 320

Gln Asn Glu Gly Thr Lys Thr Val Ala Asn Asn Leu Thr Ser Thr Val
325 330 335

Gln Ile Phe Ala Asp Ser Ser Tyr Glu Leu Pro Tyr Val Met Asp Ala
340 345 350

Gly Gln Glu Gly Ser Leu Pro Pro Phe Pro Asn Asp Val Phe Met Val
355 360 365

Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser Gln Ala Val Gly
370 375 380

Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser Gln Met Leu Arg
385 390 395 400

Thr Gly Asn Asn Phe Glu Ile Thr Tyr Ser Phe Glu Lys Val Pro Phe
405 410 415

His Ser Met Tyr Ala His Ser Gln Ser Leu Asp Arg Leu Met Asn Pro
420 425 430

Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr Gln Thr Thr Gly
435 440 445

Gly Thr Ala Asn Thr Gln Thr Leu Gly Phe Ser Gln Gly Gly Pro Asn
450 455 460

Thr Met Ala Asn Gln Ala Lys Asn Trp Leu Pro Gly Pro Cys Tyr Arg
465 470 475 480

Gln Gln Arg Val Ser Thr Thr Thr Gly Gln Asn Asn Asn Ser Asn Phe
485 490 495

Ala Trp Thr Ala Gly Thr Lys Tyr His Leu Asn Gly Arg Asn Ser Leu
500 505 510

Ala Asn Pro Gly Ile Ala Met Ala Thr His Lys Asp Asp Glu Glu Arg
515 520 525

Phe Phe Pro Ser Asn Gly Ile Leu Ile Phe Gly Lys Gln Asn Ala Ala
530 535 540

Arg Asp Asn Ala Asp Tyr Ser Asp Val Met Leu Thr Ser Glu Glu Glu
545 550 555 560

Ile Lys Thr Thr Asn Pro Val Ala Thr Glu Glu Tyr Gly Ile Val Ala
565 570 575

Asp Asn Leu Gln Gln Gln Asn Thr Ala Pro Gln Ile Gly Thr Val Asn
580 585 590

Ser Gln Gly Ala Val Pro Gly Met Val Trp Gln Asn Arg Asp Ile Tyr
595 600 605

Tyr Gln Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe
610 615 620

His Pro Ser Pro Leu Ile Gly Gly Phe Gly Leu Lys His Pro Pro Pro
625 630 635 640

Gln Ile Phe Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ala Thr Thr
645 650 655

Phe Ser Ser Thr Pro Val Asn Ser Phe Ile Thr Gln Tyr Ser Thr Gly
660 665 670

Gln Val Ser Val Gln Ile Asp Trp Glu Ile Gln Lys Glu Arg Ser Lys
675 680 685

Arg Trp Asn Pro Glu Val Gln Phe Thr Ser Asn Tyr Tyr Lys Ser Thr
690 695 700

Ser Val Asp Phe Ala Val Asn Thr Glu Gly Val Tyr Thr Glu Pro Arg
705 710 715 720

Ala Ile Gly Thr Arg Tyr Leu Thr His His Leu
725 730

<210> 112

<211> 730

<212> PRT

<213> Adeno-Associated Virus

<400> 112

Met Thr Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser Glu
1 5 10 15

Gly Val Arg Glu Trp Trp Ala Leu Gln Pro Gly Ala Pro Lys Pro Lys
20 25 30

Ala Asn Gln Gln His Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Lys Tyr Leu Gly Pro Gly Asn Gly Leu Asp Lys Gly Glu Pro Val
50 55 60

Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp Gln
65 70 75 80

Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
85 90 95

Ala Glu Phe Gln Gln Arg Leu Gln Gly Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro Leu
115 120 125

Gly Leu Val Glu Gln Ala Gly Glu Thr Ala Pro Gly Lys Lys Arg Pro
130 135 140

Leu Ile Glu Ser Pro Gln Gln Pro Asp Ser Ser Thr Gly Ile Gly Lys
145 150 155 160

Lys Gly Lys Gln Pro Ala Lys Lys Lys Leu Val Phe Glu Asp Glu Thr
165 170 175

Gly Ala Gly Asp Gly Pro Pro Glu Gly Ser Thr Ser Gly Ala Met Ser
180 185 190

Asp Asp Ser Glu Met Arg Ala Ala Ala Gly Gly Ala Ala Val Glu Gly
195 200 205

Gly Gln Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asp Trp His Cys
210 215 220

Asp Ser Thr Trp Ser Glu Gly His Val Thr Thr Thr Ser Thr Arg Thr
225 230 235 240

Trp Val Leu Pro Thr Tyr Asn Asn His Leu Tyr Lys Gln Ile Ser Asn
245 250 255

Ser Thr Ser Gly Gly Ser Ser Asn Asp Asn Ala Tyr Phe Gly Phe Ser

260	265	270
Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Cys His Phe Ser		
275	280	285
Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp Gly Met Arg Pro		
290	295	300
Lys Ala Met Arg Val Lys Ile Phe Asn Ile Gln Val Lys Glu Val Thr		
305	310	315
Asp Asn Asn Gly Val Lys Thr Val Ala Asn Asn Leu Thr Ser Thr Val		
	325	330
Gln Ile Phe Ala Asp Ser Ser Tyr Glu Leu Pro Tyr Val Met Asp Ala		
	340	345
Gly Gln Glu Gly Ser Leu Pro Pro Phe Pro Asn Asp Val Phe Met Val		
	355	360
Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asp Gly Ser Gln Ala Val Gly		
	370	375
Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser Gln Met Leu Arg		
385	390	395
Thr Gly Asn Asn Phe Glu Ile Thr Tyr Ser Phe Glu Lys Val Pro Phe		
	405	410
His Ser Met Tyr Ala His Ser Gln Ser Leu Asp Arg Leu Met Asn Pro		
	420	425
Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Lys Thr Ile Asn Gly Ser		
	435	440
Gly Gln Asn Gln Gln Thr Leu Lys Phe Ser Val Ala Gly Pro Ser Asn		
	450	455
Met Ala Val Gln Gly Arg Asn Trp Leu Pro Gly Pro Ser Ile Arg Gln		
465	470	475
Gln Arg Val Ser Thr Thr Val Thr Gln Asn Asn Asn Ser Glu Phe Ala		
	485	490
		495

Trp Pro Gly Ala Ser Ser Trp Ala Leu Asn Gly Arg Trp Ser Ala Leu
500 505 510

Thr Pro Gly Pro Pro Met Ala Thr His Lys Glu Gly Glu Asp Arg Phe
515 520 525

Phe Pro Leu Ser Gly Ser Leu Ile Phe Gly Lys Gln Gly Thr Gly Arg
530 535 540

Asp Asn Val Asp Ala Asp Lys Leu Ile Phe Thr Ser Glu Glu Glu Leu
545 550 555 560

Ala Ala Thr Asn Ala Thr Asp Thr Asp Met Trp Gly Gln Val Ala Thr
565 570 575

Asn His Gln Ser Ala Gln Ala Gln Ala Gln Thr Gly Trp Val Gln Asn
580 585 590

Gln Gly Ala Val Pro Gly Met Val Trp Gln Asn Arg Asp Ile Tyr Tyr
595 600 605

Gln Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His
610 615 620

Pro Ser Pro Leu Ile Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln
625 630 635 640

Ile Phe Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ala Thr Thr Phe
645 650 655

Ser Ser Thr Pro Val Asn Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln
660 665 670

Val Ser Val Gln Ile Asp Trp Glu Ile Gln Lys Glu Arg Ser Lys Arg
675 680 685

Trp Asn Pro Glu Val Gln Phe Thr Ser Asn Tyr Tyr Lys Ser Thr Ser
690 695 700

Val Asp Phe Ala Val Asn Thr Glu Gly Val Tyr Thr Glu Pro Arg Ala
705 710 715 720

Ile Gly Thr Arg Tyr Leu Thr His His Leu

725

730

<210> 113
 <211> 728
 <212> PRT
 <213> Adeno-Associated Virus

<400> 113

Met Thr Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser Glu
 1 5 10 15

Gly Val Arg Glu Trp Trp Ala Leu Gln Pro Gly Ala Pro Lys Pro Lys
 20 25 30

Ala Asn Gln Gln His Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
 35 40 45

Tyr Lys Tyr Leu Gly Pro Gly Asn Gly Leu Asp Lys Gly Glu Pro Val
 50 55 60

Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp Gln
 65 70 75 80

Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
 85 90 95

Ala Glu Phe Gln Gln Arg Leu Gln Gly Asp Thr Ser Phe Gly Gly Asn
 100 105 110

Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro Leu
 115 120 125

Gly Leu Val Glu Gln Ala Gly Glu Thr Ala Pro Gly Lys Lys Arg Pro
 130 135 140

Leu Ile Glu Ser Pro Gln Gln Pro Asp Ser Ser Thr Gly Ile Gly Lys
 145 150 155 160

Lys Gly Lys Gln Pro Ala Lys Lys Lys Leu Val Phe Glu Asp Glu Thr
 165 170 175

Gly Ala Gly Asp Gly Pro Pro Glu Gly Ser Thr Ser Gly Ala Met Ser
 180 185 190

Asp Asp Ser Glu Met Arg Ala Ala Ala Gly Gly Ala Ala Val Glu Gly
195 200 205

Gly Gln Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asp Trp His Cys
210 215 220

Asp Ser Thr Trp Ser Glu Gly His Val Thr Thr Thr Ser Thr Arg Thr
225 230 235 240

Trp Val Leu Pro Thr Tyr Asn Asn His Leu Tyr Lys Arg Leu Gly Glu
245 250 255

Ser Leu Gln Ser Asn Thr Tyr Asn Gly Phe Ser Thr Pro Trp Gly Tyr
260 265 270

Phe Asp Phe Asn Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln
275 280 285

Arg Leu Ile Asn Asn Asn Trp Gly Met Arg Pro Lys Ala Met Arg Val
290 295 300

Lys Ile Phe Asn Ile Gln Val Lys Glu Val Thr Thr Ser Asn Gly Glu
305 310 315 320

Thr Thr Val Ala Asn Asn Leu Thr Ser Thr Val Gln Ile Phe Ala Asp
325 330 335

Ser Ser Tyr Glu Leu Pro Tyr Val Met Asp Ala Gly Gln Glu Gly Ser
340 345 350

Leu Pro Pro Phe Pro Asn Asp Val Phe Met Val Pro Gln Tyr Gly Tyr
355 360 365

Cys Gly Leu Val Thr Gly Asn Thr Ser Gln Gln Gln Thr Asp Arg Asn
370 375 380

Ala Phe Tyr Cys Leu Glu Tyr Phe Pro Ser Gln Met Leu Arg Thr Gly
385 390 395 400

Asn Asn Phe Glu Ile Thr Tyr Ser Phe Glu Lys Val Pro Phe His Ser
405 410 415

Met Tyr Ala His Ser Gln Ser Leu Asp Arg Leu Met Asn Pro Leu Ile
420 425 430

Asp Gln Tyr Leu Tyr Tyr Leu Ser Lys Thr Ile Asn Gly Ser Gly Gln
435 440 445

Asn Gln Gln Thr Leu Lys Phe Ser Val Ala Gly Pro Ser Asn Met Ala
450 455 460

Val Gln Gly Arg Asn Tyr Ile Pro Gly Pro Ser Tyr Arg Gln Gln Arg
465 470 475 480

Val Ser Thr Thr Val Thr Gln Asn Asn Asn Ser Glu Phe Ala Trp Pro
485 490 495

Gly Ala Ser Ser Trp Ala Leu Asn Gly Arg Asn Ser Leu Met Asn Pro
500 505 510

Gly Pro Ala Met Ala Ser His Lys Glu Gly Glu Asp Arg Phe Phe Pro
515 520 525

Leu Ser Gly Ser Leu Ile Phe Gly Lys Gln Gly Thr Gly Arg Asp Asn
530 535 540

Val Asp Ala Asp Lys Val Met Ile Thr Asn Glu Glu Glu Ile Lys Thr
545 550 555 560

Thr Asn Pro Val Ala Thr Glu Ser Tyr Gly Gln Val Ala Thr Asn His
565 570 575

Gln Ser Ala Gln Ala Gln Ala Gln Thr Gly Trp Val Gln Asn Gln Gly
580 585 590

Ala Val Pro Gly Met Val Trp Gln Asn Arg Asp Ile Tyr Tyr Gln Gly
595 600 605

Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro Ser
610 615 620

Pro Leu Ile Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile Phe
625 630 635 640

Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ala Thr Thr Phe Ser Ser
645 650 655

Thr Pro Val Asn Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val Ser
660 665 670

Val Gln Ile Asp Trp Glu Ile Gln Lys Glu Arg Ser Lys Arg Trp Asn
675 680 685

Pro Glu Val Gln Phe Thr Ser Asn Tyr Gly Gln Gln Asn Ser Leu Leu
690 695 700

Trp Ala Pro Asp Ala Ala Gly Lys Tyr Thr Glu Pro Arg Ala Ile Gly
705 710 715 720

Thr Arg Tyr Leu Thr His His Leu
725

<210> 114
<211> 730
<212> PRT
<213> Adeno-Associated Virus

<400> 114

Met Thr Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser Glu
1 5 10 15

Gly Val Arg Glu Trp Trp Ala Leu Gln Pro Gly Ala Pro Lys Pro Lys
20 25 30

Ala Asn Gln Gln His Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Lys Tyr Leu Gly Pro Gly Asn Gly Leu Asp Lys Gly Glu Pro Val
50 55 60

Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp Gln
65 70 75 80

Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
85 90 95

Ala Glu Phe Gln Gln Arg Leu Gln Gly Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro Leu
115 120 125

Gly Leu Val Glu Gln Ala Gly Glu Thr Ala Pro Gly Lys Lys Arg Pro
130 135 140

Leu Ile Glu Ser Pro Gln Gln Pro Asp Ser Ser Thr Gly Ile Gly Lys
145 150 155 160

Lys Gly Lys Gln Pro Ala Lys Lys Lys Leu Val Phe Glu Asp Glu Thr
165 170 175

Gly Ala Gly Asp Gly Pro Pro Glu Gly Ser Thr Ser Gly Ala Met Ser
180 185 190

Asp Asp Ser Glu Met Arg Ala Ala Ala Gly Gly Ala Ala Val Glu Gly
195 200 205

Gly Gln Gly Ala Asp Gly Val Gly Asn Ala Ser Gly Asp Trp His Cys
210 215 220

Asp Ser Thr Trp Ser Glu Gly His Val Thr Thr Thr Ser Thr Arg Thr
225 230 235 240

Trp Val Leu Pro Thr Tyr Asn Asn His Leu Tyr Lys Gln Ile Ser Asn
245 250 255

Ser Thr Ser Gly Gly Ser Ser Asn Asp Asn Ala Tyr Phe Gly Phe Ser
260 265 270

Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Cys His Phe Ser
275 280 285

Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp Gly Met Arg Pro
290 295 300

Lys Ala Met Arg Val Lys Ile Phe Asn Ile Gln Val Lys Glu Val Thr
305 310 315 320

Asp Asn Asn Gly Val Lys Thr Val Ala Asn Asn Leu Thr Ser Thr Val
325 330 335

Gln Ile Phe Ala Asp Ser Ser Tyr Glu Leu Pro Tyr Val Met Asp Ala
340 345 350

Gly Gln Glu Gly Ser Leu Pro Pro Phe Pro Asn Asp Val Phe Met Val

355					360					365					
Pro	Gln	Tyr	Gly	Tyr	Leu	Thr	Leu	Asn	Asp	Gly	Ser	Gln	Ala	Val	Gly
370						375					380				
Arg	Ser	Ser	Phe	Tyr	Cys	Leu	Glu	Tyr	Phe	Pro	Ser	Gln	Met	Leu	Arg
385					390					395					400
Thr	Gly	Asn	Asn	Phe	Glu	Ile	Thr	Tyr	Ser	Phe	Glu	Lys	Val	Pro	Phe
				405					410					415	
His	Ser	Met	Tyr	Ala	His	Ser	Gln	Ser	Leu	Asp	Arg	Leu	Met	Asn	Pro
			420					425					430		
Leu	Ile	Asp	Gln	Tyr	Leu	Tyr	Tyr	Leu	Ser	Lys	Thr	Ile	Asn	Gly	Ser
		435					440					445			
Gly	Gln	Asn	Gln	Gln	Thr	Leu	Lys	Phe	Ser	Val	Ala	Gly	Pro	Ser	Asn
	450					455					460				
Met	Ala	Val	Gln	Gly	Arg	Asn	Tyr	Ile	Pro	Gly	Pro	Ser	Tyr	Arg	Gln
465					470					475					480
Gln	Arg	Val	Ser	Thr	Thr	Val	Thr	Gln	Asn	Asn	Asn	Ser	Glu	Phe	Ala
				485					490					495	
Trp	Pro	Gly	Ala	Ser	Ser	Trp	Ala	Leu	Asn	Gly	Arg	Asn	Ser	Leu	Met
			500					505					510		
Asn	Pro	Gly	Pro	Ala	Met	Ala	Ser	His	Lys	Glu	Gly	Glu	Asp	Arg	Phe
		515					520					525			
Phe	Pro	Leu	Ser	Gly	Ser	Leu	Ile	Phe	Gly	Lys	Gln	Gly	Thr	Gly	Arg
	530					535					540				
Asp	Asn	Val	Asp	Ala	Asp	Lys	Val	Met	Ile	Thr	Asn	Glu	Glu	Glu	Ile
545					550					555					560
Lys	Thr	Thr	Asn	Pro	Val	Ala	Thr	Glu	Ser	Tyr	Gly	Gln	Val	Ala	Thr
				565					570					575	
Asn	His	Gln	Ser	Ala	Gln	Ala	Gln	Ala	Gln	Thr	Gly	Trp	Val	Gln	Asn
			580					585					590		

Gln Gly Ala Val Pro Gly Met Val Trp Gln Asn Arg Asp Ile Tyr Tyr
595 600 605

Gln Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His
610 615 620

Pro Ser Pro Leu Ile Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln
625 630 635 640

Ile Phe Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ala Thr Thr Phe
645 650 655

Ser Ser Thr Pro Val Asn Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln
660 665 670

Val Ser Val Gln Ile Asp Trp Glu Ile Gln Lys Glu Arg Ser Lys Arg
675 680 685

Trp Asn Pro Glu Val Gln Phe Thr Ser Asn Tyr Tyr Lys Ser Asn Asn
690 695 700

Val Glu Phe Ala Val Asn Thr Glu Gly Val Tyr Thr Glu Pro Arg Ala
705 710 715 720

Ile Gly Thr Arg Tyr Leu Thr His His Leu
725 730

<210> 115

<211> 730

<212> PRT

<213> Adeno-Associated Virus

<400> 115

Met Ser Phe Val Asp His Pro Pro Asp Trp Leu Glu Ser Ile Gly Asp
1 5 10 15

Gly Phe Arg Glu Phe Leu Gly Leu Glu Ala Gly Pro Pro Lys Pro Lys
20 25 30

Ala Asn Gln Gln Lys Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Lys Tyr Leu Gly Pro Gly Asn Gly Leu Asp Lys Gly Asp Pro Val
50 55 60

Asn Phe Ala Asp Glu Val Ala Arg Glu His Asp Leu Ser Tyr Gln Lys
65 70 75 80

Gln Leu Glu Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
85 90 95

Ala Glu Phe Gln Glu Lys Leu Ala Ser Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Ile Leu Glu Pro Leu
115 120 125

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

Pro Leu Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Val Gly
145 150 155 160

Lys Lys Gly Lys Gln Pro Ala Arg Lys Arg Leu Asn Phe Asp Asp Glu
165 170 175

Pro Gly Ala Gly Asp Gly Pro Pro Pro Glu Gly Pro Ser Ser Gly Ala
180 185 190

Met Ser Thr Glu Thr Glu Met Arg Ala Ala Ala Gly Gly Asn Gly Gly
195 200 205

Asp Ala Gly Gln Gly Ala Glu Gly Val Gly Asn Ala Ser Gly Asp Trp
210 215 220

His Cys Asp Ser Thr Trp Ser Glu Ser His Val Thr Thr Thr Ser Thr
225 230 235 240

Arg Thr Trp Val Leu Pro Thr Tyr Asn Asn His Leu Tyr Leu Gln Ile
245 250 255

Ser Asn Ser Thr Ser Gly Gly Ser Ser Asn Asp Asn Ala Tyr Phe Gly
260 265 270

Phe Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Cys His
275 280 285

Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn His Trp Gly Leu
290 295 300

Arg Pro Lys Ser Met Gln Val Arg Ile Phe Asn Ile Gln Val Lys Glu
305 310 315 320

Val Thr Asp Asn Asn Gly Val Lys Ser Asn Asn Leu Thr Ser Thr Val
325 330 335

Gln Ile Phe Ala Asp Ser Thr Tyr Glu Leu Pro Tyr Val Met Asp Ala
340 345 350

Gly Gln Glu Gly Ser Leu Pro Pro Phe Pro Asn Asp Val Phe Met Val
355 360 365

Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asp Gly Ser Gln Ala Val Gly
370 375 380

Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser Gln Met Leu Arg
385 390 395 400

Thr Gly Asn Asn Phe Glu Met Val Tyr Lys Phe Glu Asn Val Pro Phe
405 410 415

His Ser Met Tyr Ala His Ser Gln Ser Leu Asp Arg Leu Met Asn Pro
420 425 430

Leu Leu Asp Gln Tyr Leu Tyr Tyr Leu Ser Lys Thr Ile Asn Gly Ser
435 440 445

Gly Gln Asn Gln Gln Thr Leu Lys Phe Ser Val Ala Gly Pro Ser Asn
450 455 460

Met Ala Val Gln Gly Arg Asn Trp Leu Pro Gly Pro Met Met Arg Gln
465 470 475 480

Gln Arg Val Ser Thr Thr Val Thr Gln Asn Asn Asn Ser Glu Phe Ala
485 490 495

Trp Pro Gly Ala Ser Ser Trp Ala Leu Asn Gly Arg Trp Ser Asn Phe
500 505 510

Ala Pro Gly Thr Ala Met Ala Thr His Lys Glu Gly Glu Asp Arg Phe
515 520 525

Phe Pro Leu Ser Gly Ser Leu Ile Phe Gly Lys Gln Gly Thr Gly Arg
530 535 540

Asp Asn Val Asp Ala Asp Lys Leu Met Phe Thr Ser Glu Asp Glu Leu
545 550 555 560

Arg Ala Thr Asn Pro Arg Asp Thr Asp Leu Phe Gly Gln Val Ala Thr
565 570 575

Asn His Gln Ser Ala Gln Ala Gln Ala Gln Thr Gly Trp Val Gln Asn
580 585 590

Gln Gly Val Tyr Pro Gly Met Val Trp Gln Asp Arg Asp Ile Tyr Tyr
595 600 605

Gln Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His
610 615 620

Pro Ser Pro Leu Ile Gly Gly Phe Gly Leu Lys Ser Pro Pro Pro Gln
625 630 635 640

Ile Phe Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ala Thr Thr Phe
645 650 655

Ser Pro Ala Arg Ile Asn Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln
660 665 670

Val Ala Val Lys Ile Glu Trp Glu Ile Gln Lys Glu Arg Ser Lys Arg
675 680 685

Trp Asn Pro Glu Val Gln Phe Thr Ser Asn Tyr Tyr Lys Ser Asn Asn
690 695 700

Val Glu Phe Ala Val Asn Thr Glu Gly Val Tyr Lys Glu Pro Arg Ala
705 710 715 720

Ile Gly Ser Arg Tyr Leu Thr Asn His Leu
725 730

<210> 116

<211> 730

<212> PRT

<213> Adeno-Associated Virus

<400> 116

Met Ser Phe Val Asp His Pro Pro Asp Trp Leu Glu Ser Ile Gly Asp
1 5 10 15

Gly Phe Arg Glu Phe Leu Gly Leu Glu Ala Gly Pro Pro Lys Pro Lys
20 25 30

Ala Asn Gln Gln Lys Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Lys Tyr Leu Gly Pro Gly Asn Gly Leu Asp Lys Gly Asp Pro Val
50 55 60

Asn Phe Ala Asp Glu Val Ala Arg Glu His Asp Leu Ser Tyr Gln Lys
65 70 75 80

Gln Leu Glu Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
85 90 95

Ala Glu Phe Gln Glu Lys Leu Ala Ser Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Ile Leu Glu Pro Leu
115 120 125

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

Pro Leu Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Val Gly
145 150 155 160

Lys Lys Gly Lys Gln Pro Ala Arg Lys Arg Leu Asn Phe Asp Asp Glu
165 170 175

Pro Gly Ala Gly Asp Gly Pro Pro Pro Glu Gly Pro Ser Ser Gly Ala
180 185 190

Met Ser Thr Glu Thr Glu Met Arg Ala Ala Ala Gly Gly Asn Gly Gly
195 200 205

Asp Ala Gly Gln Gly Ala Glu Gly Val Gly Asn Ala Ser Gly Asp Trp
210 215 220

His Cys Asp Ser Thr Trp Ser Glu Ser His Val Thr Thr Thr Ser Thr
225 230 235 240

Arg Thr Trp Val Leu Pro Thr Tyr Asn Asn His Leu Tyr Leu Arg Leu
245 250 255

Gly Ser Ser Asn Ala Ser Asp Thr Phe Asn Gly Phe Ser Thr Pro Trp
260 265 270

Gly Tyr Phe Asp Phe Asn Arg Phe His Cys His Phe Ser Pro Arg Asp
275 280 285

Trp Gln Arg Leu Ile Asn Asn His Trp Gly Leu Arg Pro Lys Ser Met
290 295 300

Gln Val Arg Ile Phe Asn Ile Gln Val Lys Glu Val Thr Thr Ser Asn
305 310 315 320

Gly Glu Thr Thr Val Ser Asn Asn Leu Thr Ser Thr Val Gln Ile Phe
325 330 335

Ala Asp Ser Thr Tyr Glu Leu Pro Tyr Val Met Asp Ala Gly Gln Glu
340 345 350

Gly Ser Leu Pro Pro Phe Pro Asn Asp Val Phe Met Val Pro Gln Tyr
355 360 365

Gly Tyr Cys Gly Leu Val Thr Gly Gly Ser Ser Gln Asn Gln Thr Asp
370 375 380

Arg Asn Ala Phe Tyr Cys Leu Glu Tyr Phe Pro Ser Gln Met Leu Arg
385 390 395 400

Thr Gly Asn Asn Phe Glu Met Val Tyr Lys Phe Glu Asn Val Pro Phe
405 410 415

His Ser Met Tyr Ala His Ser Gln Ser Leu Asp Arg Leu Met Asn Pro
420 425 430

Leu Leu Asp Gln Tyr Leu Tyr Tyr Leu Ser Lys Thr Ile Asn Gly Ser
435 440 445

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

450		455		460											
Met	Ala	Val	Gln	Gly	Arg	Asn	Tyr	Ile	Pro	Gly	Pro	Ser	Tyr	Arg	Gln
465					470					475					480
Gln	Arg	Val	Ser	Thr	Thr	Val	Thr	Gln	Asn	Asn	Asn	Ser	Glu	Phe	Ala
				485					490					495	
Trp	Pro	Gly	Ala	Ser	Ser	Trp	Ala	Leu	Asn	Gly	Arg	Asn	Ser	Leu	Met
			500					505					510		
Asn	Pro	Gly	Pro	Ala	Met	Ala	Ser	His	Lys	Glu	Gly	Glu	Asp	Arg	Phe
		515					520					525			
Phe	Pro	Leu	Ser	Gly	Ser	Leu	Ile	Phe	Gly	Lys	Gln	Gly	Thr	Gly	Arg
	530					535					540				
Asp	Asn	Val	Asp	Ala	Asp	Lys	Val	Met	Ile	Thr	Asn	Glu	Glu	Glu	Ile
545					550					555					560
Lys	Thr	Thr	Asn	Pro	Val	Ala	Thr	Glu	Ser	Tyr	Gly	Gln	Val	Ala	Thr
			565						570					575	
Asn	His	Gln	Ser	Ala	Gln	Ala	Gln	Ala	Gln	Thr	Gly	Trp	Val	Gln	Asn
			580					585					590		
Gln	Gly	Val	Tyr	Pro	Gly	Met	Val	Trp	Gln	Asp	Arg	Asp	Ile	Tyr	Tyr
		595					600					605			
Gln	Gly	Pro	Ile	Trp	Ala	Lys	Ile	Pro	His	Thr	Asp	Gly	His	Phe	His
	610					615					620				
Pro	Ser	Pro	Leu	Ile	Gly	Gly	Phe	Gly	Leu	Lys	Ser	Pro	Pro	Pro	Gln
625					630					635					640
Ile	Phe	Ile	Lys	Asn	Thr	Pro	Val	Pro	Ala	Asn	Pro	Ala	Thr	Thr	Phe
				645					650					655	
Ser	Pro	Ala	Arg	Ile	Asn	Ser	Phe	Ile	Thr	Gln	Tyr	Ser	Thr	Gly	Gln
			660					665					670		
Val	Ala	Val	Lys	Ile	Glu	Trp	Glu	Ile	Gln	Lys	Glu	Arg	Ser	Lys	Arg
		675					680					685			

Trp Asn Pro Glu Val Gln Phe Thr Ser Asn Tyr Gly Ala Gln Asp Ser
690 695 700

Leu Leu Trp Ala Pro Asp Asn Ala Gly Ala Tyr Lys Glu Pro Arg Ala
705 710 715 720

Ile Gly Ser Arg Tyr Leu Thr Asn His Leu
725 730

<210> 117
<211> 730
<212> PRT
<213> Adeno-Associated Virus

<400> 117

Met Ser Phe Val Asp His Pro Pro Asp Trp Leu Glu Ser Ile Gly Asp
1 5 10 15

Gly Phe Arg Glu Phe Leu Gly Leu Glu Ala Gly Pro Pro Lys Pro Lys
20 25 30

Ala Asn Gln Gln Lys Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Lys Tyr Leu Gly Pro Gly Asn Gly Leu Asp Lys Gly Asp Pro Val
50 55 60

Asn Phe Ala Asp Glu Val Ala Arg Glu His Asp Leu Ser Tyr Gln Lys
65 70 75 80

Gln Leu Glu Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
85 90 95

Ala Glu Phe Gln Glu Lys Leu Ala Ser Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Ile Leu Glu Pro Leu
115 120 125

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

Pro Leu Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Val Gly
145 150 155 160

Lys Lys Gly Lys Gln Pro Ala Arg Lys Arg Leu Asn Phe Asp Asp Glu
165 170 175

Pro Gly Ala Gly Asp Gly Pro Pro Pro Glu Gly Pro Ser Ser Gly Ala
180 185 190

Met Ser Thr Glu Thr Glu Met Arg Ala Ala Ala Gly Gly Asn Gly Gly
195 200 205

Asp Ala Gly Gln Gly Ala Glu Gly Val Gly Asn Ala Ser Gly Asp Trp
210 215 220

His Cys Asp Ser Thr Trp Ser Glu Ser His Val Thr Thr Thr Ser Thr
225 230 235 240

Arg Thr Trp Val Leu Pro Thr Tyr Asn Asn His Leu Tyr Leu Gln Ile
245 250 255

Ser Asn Ser Thr Ser Gly Gly Ser Ser Asn Asp Asn Ala Tyr Phe Gly
260 265 270

Phe Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Cys His
275 280 285

Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn His Trp Gly Leu
290 295 300

Arg Pro Lys Ser Met Gln Val Arg Ile Phe Asn Ile Gln Val Lys Glu
305 310 315 320

Val Thr Asp Asn Asn Gly Val Lys Ser Asn Asn Leu Thr Ser Thr Val
325 330 335

Gln Ile Phe Ala Asp Ser Thr Tyr Glu Leu Pro Tyr Val Met Asp Ala
340 345 350

Gly Gln Glu Gly Ser Leu Pro Pro Phe Pro Asn Asp Val Phe Met Val
355 360 365

Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asp Gly Ser Gln Ala Val Gly
370 375 380

Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser Gln Met Leu Arg
385 390 395 400

Thr Gly Asn Asn Phe Glu Met Val Tyr Lys Phe Glu Asn Val Pro Phe
405 410 415

His Ser Met Tyr Ala His Ser Gln Ser Leu Asp Arg Leu Met Asn Pro
420 425 430

Leu Leu Asp Gln Tyr Leu Tyr Tyr Leu Ser Lys Thr Ile Asn Gly Ser
435 440 445

Gly Gln Asn Gln Gln Thr Leu Lys Phe Ser Val Ala Gly Pro Ser Asn
450 455 460

Met Ala Val Gln Gly Arg Asn Tyr Ile Pro Gly Pro Ser Tyr Arg Gln
465 470 475 480

Gln Arg Val Ser Thr Thr Val Thr Gln Asn Asn Asn Ser Glu Phe Ala
485 490 495

Trp Pro Gly Ala Ser Ser Trp Ala Leu Asn Gly Arg Asn Ser Leu Met
500 505 510

Asn Pro Gly Pro Ala Met Ala Ser His Lys Glu Gly Glu Asp Arg Phe
515 520 525

Phe Pro Leu Ser Gly Ser Leu Ile Phe Gly Lys Gln Gly Thr Gly Arg
530 535 540

Asp Asn Val Asp Ala Asp Lys Val Met Ile Thr Asn Glu Glu Glu Ile
545 550 555 560

Lys Thr Thr Asn Pro Val Ala Thr Glu Ser Tyr Gly Gln Val Ala Thr
565 570 575

Asn His Gln Ser Ala Gln Ala Gln Ala Gln Thr Gly Trp Val Gln Asn
580 585 590

Gln Gly Val Tyr Pro Gly Met Val Trp Gln Asp Arg Asp Ile Tyr Tyr
595 600 605

Gln Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His
610 615 620

Pro Ser Pro Leu Ile Gly Gly Phe Gly Leu Lys Ser Pro Pro Pro Gln
625 630 635 640

Ile Phe Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ala Thr Thr Phe
645 650 655

Ser Pro Ala Arg Ile Asn Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln
660 665 670

Val Ala Val Lys Ile Glu Trp Glu Ile Gln Lys Glu Arg Ser Lys Arg
675 680 685

Trp Asn Pro Glu Val Gln Phe Thr Ser Asn Tyr Tyr Lys Ser Asn Asn
690 695 700

Val Glu Phe Ala Val Asn Thr Glu Gly Val Tyr Lys Glu Pro Arg Ala
705 710 715 720

Ile Gly Ser Arg Tyr Leu Thr Asn His Leu
725 730

<210> 118
<211> 731
<212> PRT
<213> Adeno-Associated Virus

<400> 118

Met Ser Phe Val Asp His Pro Pro Asp Trp Leu Glu Ser Ile Gly Asp
1 5 10 15

Gly Phe Arg Glu Phe Leu Gly Leu Glu Ala Gly Pro Pro Lys Pro Lys
20 25 30

Ala Asn Gln Gln Lys Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Lys Tyr Leu Gly Pro Gly Asn Gly Leu Asp Lys Gly Asp Pro Val
50 55 60

Asn Phe Ala Asp Glu Val Ala Arg Glu His Asp Leu Ser Tyr Gln Lys
65 70 75 80

Gln Leu Glu Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp

85

90

95

Ala Glu Phe Gln Glu Lys Leu Ala Ser Asp Thr Ser Phe Gly Gly Asn
 100 105 110

Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Ile Leu Glu Pro Leu
 115 120 125

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

Pro Leu Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Val Gly
 145 150 155 160

Lys Lys Gly Lys Gln Pro Ala Arg Lys Arg Leu Asn Phe Asp Asp Glu
 165 170 175

Pro Gly Ala Gly Asp Gly Pro Pro Pro Glu Gly Pro Ser Ser Gly Ala
 180 185 190

Met Ser Thr Glu Thr Glu Met Arg Ala Ala Ala Gly Gly Asn Gly Gly
 195 200 205

Asp Ala Gly Gln Gly Ala Glu Gly Val Gly Asn Ala Ser Gly Asp Trp
 210 215 220

His Cys Asp Ser Thr Trp Ser Glu Ser His Val Thr Thr Thr Ser Thr
 225 230 235 240

Arg Thr Trp Val Leu Pro Thr Tyr Asn Asn His Leu Tyr Leu Gln Ile
 245 250 255

Ser Asn Gly Thr Ser Gly Gly Ala Thr Asn Asp Asn Thr Tyr Phe Gly
 260 265 270

Phe Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His Cys His
 275 280 285

Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn His Trp Gly Leu
 290 295 300

Arg Pro Lys Ser Met Gln Val Arg Ile Phe Asn Ile Gln Val Lys Glu
 305 310 315 320

Val Thr Gln Asn Glu Gly Thr Lys Ser Asn Asn Leu Thr Ser Thr Val
325 330 335

Gln Ile Phe Ala Asp Ser Thr Tyr Glu Leu Pro Tyr Val Met Asp Ala
340 345 350

Gly Gln Glu Gly Ser Leu Pro Pro Phe Pro Asn Asp Val Phe Met Val
355 360 365

Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser Gln Ala Val Gly
370 375 380

Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser Gln Met Leu Arg
385 390 395 400

Thr Gly Asn Asn Phe Glu Met Val Tyr Lys Phe Glu Asn Val Pro Phe
405 410 415

His Ser Met Tyr Ala His Ser Gln Ser Leu Asp Arg Leu Met Asn Pro
420 425 430

Leu Leu Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr Gln Thr Thr Gly
435 440 445

Gly Thr Ala Asn Thr Gln Thr Leu Gly Phe Ser Gln Gly Gly Pro Asn
450 455 460

Thr Met Ala Asn Gln Ala Lys Asn Trp Leu Pro Gly Pro Met Met Arg
465 470 475 480

Gln Gln Arg Val Ser Thr Thr Thr Gly Gln Asn Asn Asn Ser Asn Phe
485 490 495

Ala Trp Thr Ala Gly Thr Lys Tyr His Leu Asn Gly Arg Trp Ser Asn
500 505 510

Phe Ala Pro Gly Thr Ala Met Ala Thr His Lys Asp Asp Glu Glu Arg
515 520 525

Phe Phe Pro Ser Asn Gly Ile Leu Ile Phe Gly Lys Gln Asn Ala Ala
530 535 540

Arg Asp Asn Ala Asp Tyr Ser Asp Leu Met Phe Thr Ser Glu Asp Glu

545		550		555		560									
Leu	Arg	Ala	Thr	Asn	Pro	Arg	Asp	Thr	Asp	Leu	Phe	Gly	Ile	Val	Ala
				565					570					575	
Asp	Asn	Leu	Gln	Gln	Gln	Asn	Thr	Ala	Pro	Gln	Ile	Gly	Thr	Val	Asn
			580					585					590		
Ser	Gln	Gly	Val	Tyr	Pro	Gly	Met	Val	Trp	Gln	Asp	Arg	Asp	Ile	Tyr
		595					600					605			
Tyr	Gln	Gly	Pro	Ile	Trp	Ala	Lys	Ile	Pro	His	Thr	Asp	Gly	His	Phe
	610					615					620				
His	Pro	Ser	Pro	Leu	Ile	Gly	Gly	Phe	Gly	Leu	Lys	Ser	Pro	Pro	Pro
625					630					635					640
Gln	Ile	Phe	Ile	Lys	Asn	Thr	Pro	Val	Pro	Ala	Asn	Pro	Ala	Thr	Thr
				645					650					655	
Phe	Ser	Pro	Ala	Arg	Ile	Asn	Ser	Phe	Ile	Thr	Gln	Tyr	Ser	Thr	Gly
			660					665					670		
Gln	Val	Ala	Val	Lys	Ile	Glu	Trp	Glu	Ile	Gln	Lys	Glu	Arg	Ser	Lys
		675					680					685			
Arg	Trp	Asn	Pro	Glu	Val	Gln	Phe	Thr	Ser	Asn	Tyr	Tyr	Lys	Ser	Thr
	690					695					700				
Ser	Val	Asp	Phe	Ala	Val	Asn	Thr	Glu	Gly	Val	Tyr	Lys	Glu	Pro	Arg
705					710					715					720
Ala	Ile	Gly	Ser	Arg	Tyr	Leu	Thr	Asn	His	Leu					
				725					730						
<210> 119															
<211> 731															
<212> PRT															
<213> Adeno-Associated Virus															
<400> 119															
Met	Ser	Phe	Val	Asp	His	Pro	Pro	Asp	Trp	Leu	Glu	Ser	Ile	Gly	Asp
1				5					10					15	

Gly Phe Arg Glu Phe Leu Gly Leu Glu Ala Gly Pro Pro Lys Pro Lys
20 25 30

Ala Asn Gln Gln Lys Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Lys Tyr Leu Gly Pro Gly Asn Gly Leu Asp Lys Gly Asp Pro Val
50 55 60

Asn Phe Ala Asp Glu Val Ala Arg Glu His Asp Leu Ser Tyr Gln Lys
65 70 75 80

Gln Leu Glu Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
85 90 95

Ala Glu Phe Gln Glu Lys Leu Ala Ser Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Ile Leu Glu Pro Leu
115 120 125

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

Pro Leu Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Val Gly
145 150 155 160

Lys Lys Gly Lys Gln Pro Ala Arg Lys Arg Leu Asn Phe Asp Asp Glu
165 170 175

Pro Gly Ala Gly Asp Gly Pro Pro Pro Glu Gly Pro Ser Ser Gly Ala
180 185 190

Met Ser Thr Glu Thr Glu Met Arg Ala Ala Ala Gly Gly Asn Gly Gly
195 200 205

Asp Ala Gly Gln Gly Ala Glu Gly Val Gly Asn Ala Ser Gly Asp Trp
210 215 220

His Cys Asp Ser Thr Trp Ser Glu Ser His Val Thr Thr Thr Ser Thr
225 230 235 240

Arg Thr Trp Val Leu Pro Thr Tyr Asn Asn His Leu Tyr Leu Arg Leu
245 250 255

Gly Ser Ser Asn Ala Ser Asp Thr Phe Asn Gly Phe Ser Thr Pro Trp
260 265 270

Gly Tyr Phe Asp Phe Asn Arg Phe His Cys His Phe Ser Pro Arg Asp
275 280 285

Trp Gln Arg Leu Ile Asn Asn His Trp Gly Leu Arg Pro Lys Ser Met
290 295 300

Gln Val Arg Ile Phe Asn Ile Gln Val Lys Glu Val Thr Thr Ser Asn
305 310 315 320

Gly Glu Thr Thr Val Ser Asn Asn Leu Thr Ser Thr Val Gln Ile Phe
325 330 335

Ala Asp Ser Thr Tyr Glu Leu Pro Tyr Val Met Asp Ala Gly Gln Glu
340 345 350

Gly Ser Leu Pro Pro Phe Pro Asn Asp Val Phe Met Val Pro Gln Tyr
355 360 365

Gly Tyr Cys Gly Leu Val Thr Gly Gly Ser Ser Gln Asn Gln Thr Asp
370 375 380

Arg Asn Ala Phe Tyr Cys Leu Glu Tyr Phe Pro Ser Gln Met Leu Arg
385 390 395 400

Thr Gly Asn Asn Phe Glu Met Val Tyr Lys Phe Glu Asn Val Pro Phe
405 410 415

His Ser Met Tyr Ala His Ser Gln Ser Leu Asp Arg Leu Met Asn Pro
420 425 430

Leu Leu Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr Gln Thr Thr Gly
435 440 445

Gly Thr Ala Asn Thr Gln Thr Leu Gly Phe Ser Gln Gly Gly Pro Asn
450 455 460

Thr Met Ala Asn Gln Ala Lys Asn Trp Leu Pro Gly Pro Cys Tyr Arg
465 470 475 480

Gln Gln Arg Val Ser Thr Thr Thr Gly Gln Asn Asn Asn Ser Asn Phe
485 490 495

Ala Trp Thr Ala Gly Thr Lys Tyr His Leu Asn Gly Arg Asn Ser Leu
500 505 510

Ala Asn Pro Gly Ile Ala Met Ala Thr His Lys Asp Asp Glu Glu Arg
515 520 525

Phe Phe Pro Ser Asn Gly Ile Leu Ile Phe Gly Lys Gln Asn Ala Ala
530 535 540

Arg Asp Asn Ala Asp Tyr Ser Asp Val Met Leu Thr Ser Glu Glu Glu
545 550 555 560

Ile Lys Thr Thr Asn Pro Val Ala Thr Glu Glu Tyr Gly Ile Val Ala
565 570 575

Asp Asn Leu Gln Gln Gln Asn Thr Ala Pro Gln Ile Gly Thr Val Asn
580 585 590

Ser Gln Gly Val Tyr Pro Gly Met Val Trp Gln Asp Arg Asp Ile Tyr
595 600 605

Tyr Gln Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe
610 615 620

His Pro Ser Pro Leu Ile Gly Gly Phe Gly Leu Lys Ser Pro Pro Pro
625 630 635 640

Gln Ile Phe Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ala Thr Thr
645 650 655

Phe Ser Pro Ala Arg Ile Asn Ser Phe Ile Thr Gln Tyr Ser Thr Gly
660 665 670

Gln Val Ala Val Lys Ile Glu Trp Glu Ile Gln Lys Glu Arg Ser Lys
675 680 685

Arg Trp Asn Pro Glu Val Gln Phe Thr Ser Asn Tyr Gly Ala Gln Asp
690 695 700

Ser Leu Leu Trp Ala Pro Asp Asn Ala Gly Ala Tyr Lys Glu Pro Arg
705 710 715 720

Ala Ile Gly Ser Arg Tyr Leu Thr Asn His Leu
725 730

<210> 120
<211> 731
<212> PRT
<213> Adeno-Associated Virus

<400> 120

Met Ser Phe Val Asp His Pro Pro Asp Trp Leu Glu Ser Ile Gly Asp
1 5 10 15

Gly Phe Arg Glu Phe Leu Gly Leu Glu Ala Gly Pro Pro Lys Pro Lys
20 25 30

Ala Asn Gln Gln Lys Gln Asp Asn Ala Arg Gly Leu Val Leu Pro Gly
35 40 45

Tyr Lys Tyr Leu Gly Pro Gly Asn Gly Leu Asp Lys Gly Asp Pro Val
50 55 60

Asn Phe Ala Asp Glu Val Ala Arg Glu His Asp Leu Ser Tyr Gln Lys
65 70 75 80

Gln Leu Glu Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala Asp
85 90 95

Ala Glu Phe Gln Glu Lys Leu Ala Ser Asp Thr Ser Phe Gly Gly Asn
100 105 110

Leu Gly Lys Ala Val Phe Gln Ala Lys Lys Arg Ile Leu Glu Pro Leu
115 120 125

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

Pro Leu Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Val Gly
145 150 155 160

Lys Lys Gly Lys Gln Pro Ala Arg Lys Arg Leu Asn Phe Asp Asp Glu
165 170 175

Pro Gly Ala Gly Asp Gly Pro Pro Pro Glu Gly Pro Ser Ser Gly Ala

180		185		190											
Met	Ser	Thr	Glu	Thr	Glu	Met	Arg	Ala	Ala	Ala	Gly	Gly	Asn	Gly	Gly
		195					200					205			
Asp	Ala	Gly	Gln	Gly	Ala	Glu	Gly	Val	Gly	Asn	Ala	Ser	Gly	Asp	Trp
	210					215					220				
His	Cys	Asp	Ser	Thr	Trp	Ser	Glu	Ser	His	Val	Thr	Thr	Thr	Ser	Thr
225					230					235					240
Arg	Thr	Trp	Val	Leu	Pro	Thr	Tyr	Asn	Asn	His	Leu	Tyr	Leu	Gln	Ile
				245					250					255	
Ser	Asn	Gly	Thr	Ser	Gly	Gly	Ala	Thr	Asn	Asp	Asn	Thr	Tyr	Phe	Gly
			260					265					270		
Phe	Ser	Thr	Pro	Trp	Gly	Tyr	Phe	Asp	Phe	Asn	Arg	Phe	His	Cys	His
		275					280					285			
Phe	Ser	Pro	Arg	Asp	Trp	Gln	Arg	Leu	Ile	Asn	Asn	His	Trp	Gly	Leu
	290					295					300				
Arg	Pro	Lys	Ser	Met	Gln	Val	Arg	Ile	Phe	Asn	Ile	Gln	Val	Lys	Glu
305					310					315					320
Val	Thr	Gln	Asn	Glu	Gly	Thr	Lys	Ser	Asn	Asn	Leu	Thr	Ser	Thr	Val
				325					330					335	
Gln	Ile	Phe	Ala	Asp	Ser	Thr	Tyr	Glu	Leu	Pro	Tyr	Val	Met	Asp	Ala
			340					345					350		
Gly	Gln	Glu	Gly	Ser	Leu	Pro	Pro	Phe	Pro	Asn	Asp	Val	Phe	Met	Val
		355					360					365			
Pro	Gln	Tyr	Gly	Tyr	Leu	Thr	Leu	Asn	Asn	Gly	Ser	Gln	Ala	Val	Gly
	370					375					380				
Arg	Ser	Ser	Phe	Tyr	Cys	Leu	Glu	Tyr	Phe	Pro	Ser	Gln	Met	Leu	Arg
385					390					395					400
Thr	Gly	Asn	Asn	Phe	Glu	Met	Val	Tyr	Lys	Phe	Glu	Asn	Val	Pro	Phe
				405					410					415	

His Ser Met Tyr Ala His Ser Gln Ser Leu Asp Arg Leu Met Asn Pro
420 425 430

Leu Leu Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr Gln Thr Thr Gly
435 440 445

Gly Thr Ala Asn Thr Gln Thr Leu Gly Phe Ser Gln Gly Gly Pro Asn
450 455 460

Thr Met Ala Asn Gln Ala Lys Asn Trp Leu Pro Gly Pro Cys Tyr Arg
465 470 475 480

Gln Gln Arg Val Ser Thr Thr Thr Gly Gln Asn Asn Asn Ser Asn Phe
485 490 495

Ala Trp Thr Ala Gly Thr Lys Tyr His Leu Asn Gly Arg Asn Ser Leu
500 505 510

Ala Asn Pro Gly Ile Ala Met Ala Thr His Lys Asp Asp Glu Glu Arg
515 520 525

Phe Phe Pro Ser Asn Gly Ile Leu Ile Phe Gly Lys Gln Asn Ala Ala
530 535 540

Arg Asp Asn Ala Asp Tyr Ser Asp Val Met Leu Thr Ser Glu Glu Glu
545 550 555 560

Ile Lys Thr Thr Asn Pro Val Ala Thr Glu Glu Tyr Gly Ile Val Ala
565 570 575

Asp Asn Leu Gln Gln Gln Asn Thr Ala Pro Gln Ile Gly Thr Val Asn
580 585 590

Ser Gln Gly Val Tyr Pro Gly Met Val Trp Gln Asp Arg Asp Ile Tyr
595 600 605

Tyr Gln Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe
610 615 620

His Pro Ser Pro Leu Ile Gly Gly Phe Gly Leu Lys Ser Pro Pro Pro
625 630 635 640

Gln Ile Phe Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ala Thr Thr

				645						650						655			
Phe	Ser	Pro	Ala	Arg	Ile	Asn	Ser	Phe	Ile	Thr	Gln	Tyr	Ser	Thr	Gly				
			660					665					670						
Gln	Val	Ala	Val	Lys	Ile	Glu	Trp	Glu	Ile	Gln	Lys	Glu	Arg	Ser	Lys				
		675					680					685							
Arg	Trp	Asn	Pro	Glu	Val	Gln	Phe	Thr	Ser	Asn	Tyr	Tyr	Lys	Ser	Thr				
	690					695					700								
Ser	Val	Asp	Phe	Ala	Val	Asn	Thr	Glu	Gly	Val	Tyr	Lys	Glu	Pro	Arg				
705					710					715					720				
Ala	Ile	Gly	Ser	Arg	Tyr	Leu	Thr	Asn	His	Leu									
				725					730										
<210>	121																		
<211>	737																		
<212>	PRT																		
<213>	Adeno-Associated Virus																		
<400>	121																		
Met	Ala	Ala	Asp	Gly	Tyr	Leu	Pro	Asp	Trp	Leu	Glu	Asp	Asn	Leu	Ser				
1				5					10					15					
Glu	Gly	Ile	Arg	Glu	Trp	Trp	Ala	Leu	Lys	Pro	Gly	Ala	Pro	Lys	Pro				
			20					25					30						
Lys	Ala	Asn	Gln	Gln	Lys	Gln	Asp	Asp	Gly	Arg	Gly	Leu	Val	Leu	Pro				
		35					40					45							
Gly	Tyr	Lys	Tyr	Leu	Gly	Pro	Phe	Asn	Gly	Leu	Asp	Lys	Gly	Glu	Pro				
	50					55					60								
Val	Asn	Ala	Ala	Asp	Ala	Ala	Ala	Leu	Glu	His	Asp	Lys	Ala	Tyr	Asp				
65					70					75					80				
Gln	Gln	Leu	Gln	Ala	Gly	Asp	Asn	Pro	Tyr	Leu	Arg	Tyr	Asn	His	Ala				
			85						90					95					
Asp	Ala	Glu	Phe	Gln	Glu	Arg	Leu	Gln	Glu	Asp	Thr	Ser	Phe	Gly	Gly				
		100						105						110					

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Pro Ser Pro Gln Arg Ser Pro Asp Ser Ser Thr Gly Ile
145 150 155 160

Gly Lys Lys Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln
165 170 175

Thr Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro
180 185 190

Pro Ala Ala Pro Ser Gly Val Gly Pro Asn Thr Met Ala Ala Gly Gly
195 200 205

Gly Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser
210 215 220

Ser Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val
225 230 235 240

Ile Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His
245 250 255

Leu Tyr Lys Gln Ile Ser Asn Ser Thr Ser Gly Gly Ser Ser Asn Asp
260 265 270

Asn Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn
275 280 285

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Arg Leu Ser Phe Lys Leu Phe Asn
305 310 315 320

Ile Gln Val Lys Glu Val Thr Asp Asn Asn Gly Val Lys Thr Ile Ala
325 330 335

Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln
340 345 350

Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe
355 360 365

Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn
370 375 380

Asp Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr
385 390 395 400

Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Thr Tyr
405 410 415

Thr Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser
420 425 430

Leu Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu
435 440 445

Ser Arg Thr Ile Asn Gly Ser Gly Gln Asn Gln Gln Thr Leu Gly Phe
450 455 460

Ser Val Ala Gly Pro Ser Asn Met Ala Val Gln Gly Arg Asn Trp Leu
465 470 475 480

Pro Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Val Thr Gln
485 490 495

Asn Asn Asn Ser Glu Phe Ala Trp Pro Gly Gly Thr Lys Tyr His Leu
500 505 510

Asn Gly Arg Asn Ser Leu Ala Asn Pro Gly Ile Ala Met Ala Thr His
515 520 525

Lys Glu Gly Glu Asp Arg Phe Phe Pro Leu Ser Gly Ile Leu Ile Phe
530 535 540

Gly Lys Gln Gly Thr Gly Arg Asp Asn Val Asp Ala Asp Lys Val Met
545 550 555 560

Leu Thr Ser Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu
565 570 575

Glu Tyr Gly Ile Val Ala Thr Asn His Gln Ser Ala Gln Ala Gln Ala
580 585 590

Gln Thr Gly Thr Val Asn Ser Gln Gly Ala Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Thr Phe Asn Gln Ser Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Tyr Lys Ser Asn Asn Val Glu Phe Ala Val Asn Thr Glu Gly
705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn
725 730 735

Leu

<210> 122
<211> 737
<212> PRT
<213> Adeno-Associated Virus

<400> 122

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Pro Ser Pro Gln Arg Ser Pro Asp Ser Ser Thr Gly Ile
145 150 155 160

Gly Lys Lys Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln
165 170 175

Thr Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro
180 185 190

Pro Ala Ala Pro Ser Gly Val Gly Pro Asn Thr Met Ala Ala Gly Gly
195 200 205

Gly Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser
210 215 220

Ser Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val
225 230 235 240

Ile Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His
245 250 255

Leu Tyr Lys Gln Ile Ser Asn Ser Thr Ser Gly Gly Ser Ser Asn Asp

260	265	270
Asn Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn 275 280 285		
Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn 290 295 300		
Asn Asn Trp Gly Phe Arg Pro Lys Arg Leu Ser Phe Lys Leu Phe Asn 305 310 315 320		
Ile Gln Val Lys Glu Val Thr Asp Asn Asn Gly Val Lys Thr Ile Ala 325 330 335		
Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln 340 345 350		
Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe 355 360 365		
Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn 370 375 380		
Asp Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr 385 390 395 400		
Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Thr Tyr 405 410 415		
Thr Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser 420 425 430		
Leu Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu 435 440 445		
Ser Lys Thr Ile Asn Gly Ser Gly Gln Asn Gln Gln Thr Leu Lys Phe 450 455 460		
Ser Val Ala Gly Pro Ser Asn Met Ala Val Gln Gly Arg Asn Tyr Ile 465 470 475 480		
Pro Gly Pro Ser Tyr Arg Gln Gln Arg Val Ser Thr Thr Val Thr Gln 485 490 495		

Asn Asn Asn Ser Glu Phe Ala Trp Pro Gly Ala Ser Ser Trp Ala Leu
500 505 510

Asn Gly Arg Asn Ser Leu Met Asn Pro Gly Pro Ala Met Ala Ser His
515 520 525

Lys Glu Gly Glu Asp Arg Phe Phe Pro Leu Ser Gly Ser Leu Ile Phe
530 535 540

Gly Lys Gln Gly Thr Gly Arg Asp Asn Val Asp Ala Asp Lys Val Met
545 550 555 560

Ile Thr Asn Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu
565 570 575

Ser Tyr Gly Gln Val Ala Thr Asn His Gln Ser Ala Gln Ala Gln Ala
580 585 590

Gln Thr Gly Trp Val Gln Asn Gln Gly Ile Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Thr Phe Asn Gln Ser Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Tyr Lys Ser Asn Asn Val Glu Phe Ala Val Asn Thr Glu Gly
705 710 715 720

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

725

730

735

Leu

<210> 123

<211> 743

<212> PRT

<213> Adeno-Associated Virus

<400> 123

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
 1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
 35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
 50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
 65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
 85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
 100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
 115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
 130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
 145 150 155 160

Lys Thr Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
 165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

Ala Ala Pro Ser Gly Val Gly Ser Asn Thr Met Ala Ser Gly Gly Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Ser Thr Ser Gly Gly Ser Ser Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Asp Asn Asn Gly Val Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asp
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Phe Leu Ser
435 440 445

Arg Thr Ile Asn Gly Ser Gly Gln Asn Gln Gln Thr Leu Gln Phe Ser
450 455 460

Gln Ala Gly Pro Ser Ser Met Ala Asn Gln Ala Arg Asn Trp Val Pro
465 470 475 480

Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Val Thr Gln Asn
485 490 495

Asn Asn Ser Glu Phe Ala Trp Pro Gly Ala Thr Lys Tyr His Leu Asn
500 505 510

Gly Arg Asp Ser Leu Met Asn Pro Gly Val Ala Met Ala Ser His Lys
515 520 525

Glu Gly Glu Asp Arg Phe Phe Pro Leu Ser Gly Val Leu Ile Phe Gly
530 535 540

Lys Gln Gly Thr Gly Arg Asp Asn Val Asp Ala Asp Lys Val Met Ile
545 550 555 560

Thr Asn Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu Glu
565 570 575

Tyr Gly Ala Val Ala Thr Asn His Gln Ser Ala Gln Thr Leu Ala Val
580 585 590

Pro Phe Lys Ala Gln Ala Gln Thr Gly Leu Val His Asn Gln Gly Val
595 600 605

Leu Pro Gly Met Val Trp Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro
610 615 620

Ile Trp Ala Lys Ile Pro His Thr Asp Gly Asn Phe His Pro Ser Pro
625 630 635 640

Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile Leu Ile
645 650 655

Lys Asn Thr Pro Val Pro Ala Asp Pro Pro Thr Thr Phe Asn Gln Ala
660 665 670

Lys Leu Asn Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val Ser Val
675 680 685

Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro
690 695 700

Glu Ile Gln Tyr Thr Ser Asn Tyr Tyr Lys Ser Asn Asn Val Glu Phe
705 710 715 720

Ala Val Asn Thr Glu Gly Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr
725 730 735

Arg Phe Leu Thr Arg Asn Leu
740

<210> 124
<211> 736
<212> PRT
<213> Adeno-Associated Virus

<400> 124

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Thr Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

Ala Ala Pro Ser Gly Val Gly Ser Asn Thr Met Ala Ser Gly Gly Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Ser Thr Ser Gly Gly Ser Ser Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Asp Asn Asn Gly Val Lys Thr Ile Ala Asn

325

330

335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
 340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
 355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asp
 370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
 385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr Thr
 405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
 420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Phe Leu Ser
 435 440 445

Arg Thr Ile Asn Gly Ser Gly Gln Asn Gln Gln Thr Leu Gln Phe Ser
 450 455 460

Gln Ala Gly Pro Ser Ser Met Ala Asn Gln Ala Arg Asn Trp Val Pro
 465 470 475 480

Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Val Thr Gln Asn
 485 490 495

Asn Asn Ser Glu Phe Ala Trp Pro Gly Ala Thr Lys Tyr His Leu Asn
 500 505 510

Gly Arg Asp Ser Leu Met Asn Pro Gly Val Ala Met Ala Ser His Lys
 515 520 525

Glu Gly Glu Asp Arg Phe Phe Pro Leu Ser Gly Val Leu Ile Phe Gly
 530 535 540

Lys Gln Gly Thr Gly Arg Asp Asn Val Asp Ala Asp Lys Val Met Ile
 545 550 555 560

Thr Asn Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu Glu
565 570 575

Tyr Gly Ala Val Ala Thr Asn His Gln Ser Ala Gln Ala Gln Ala Gln
580 585 590

Thr Gly Leu Val His Asn Gln Gly Val Leu Pro Gly Met Val Trp Gln
595 600 605

Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His
610 615 620

Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Leu
625 630 635 640

Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
645 650 655

Asp Pro Pro Thr Thr Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile Thr
660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln
675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn
690 695 700

Tyr Tyr Lys Ser Asn Asn Val Glu Phe Ala Val Asn Thr Glu Gly Val
705 710 715 720

Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Phe Leu Thr Arg Asn Leu
725 730 735

<210> 125

<211> 743

<212> PRT

<213> Adeno-Associated Virus

<400> 125

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Thr Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

Ala Ala Pro Ser Gly Val Gly Ser Asn Thr Met Ala Ser Gly Gly Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Thr Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Phe Leu Ser
435 440 445

Arg Thr Ile Asn Gly Ser Gly Gln Asn Gln Gln Thr Leu Lys Phe Ser
450 455 460

Val Ala Gly Pro Ser Asn Met Ala Val Gln Gly Arg Asn Tyr Ile Pro
465 470 475 480

Gly Pro Ser Tyr Arg Gln Gln Arg Val Ser Thr Thr Val Thr Gln Asn
485 490 495

Asn Asn Ser Glu Phe Ala Trp Pro Gly Ala Ser Ser Trp Ala Leu Asn
500 505 510

Gly Arg Asn Ser Leu Met Asn Pro Gly Pro Ala Met Ala Ser His Lys
515 520 525

Glu Gly Glu Asp Arg Phe Phe Pro Leu Ser Gly Ser Leu Ile Phe Gly
530 535 540

Lys Gln Gly Thr Gly Arg Asp Asn Val Asp Ala Asp Lys Val Met Ile
545 550 555 560

Thr Asn Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu Ser
565 570 575

Tyr Gly Gln Val Ala Thr Asn His Gln Ser Ala Gln Thr Leu Ala Val
580 585 590

Pro Phe Lys Ala Gln Ala Gln Thr Gly Trp Val Gln Asn Gln Gly Val
595 600 605

Leu Pro Gly Met Val Trp Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro
610 615 620

Ile Trp Ala Lys Ile Pro His Thr Asp Gly Asn Phe His Pro Ser Pro
625 630 635 640

Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile Leu Ile
645 650 655

Lys Asn Thr Pro Val Pro Ala Asp Pro Pro Thr Thr Phe Asn Gln Ala
660 665 670

Lys Leu Asn Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val Ser Val
675 680 685

Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro
690 695 700

Glu Ile Gln Tyr Thr Ser Asn Tyr Tyr Lys Ser Thr Asn Val Asp Phe
705 710 715 720

Ala Val Asn Thr Glu Gly Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr
725 730 735

Arg Phe Leu Thr Arg Asn Leu
740

<210> 126
<211> 736
<212> PRT
<213> Adeno-Associated Virus

<400> 126

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Thr Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

Ala Ala Pro Ser Gly Val Gly Ser Asn Thr Met Ala Ser Gly Gly Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Thr Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr Thr

				405						410					415	
Phe	Glu	Asp	Val	Pro	Phe	His	Ser	Ser	Tyr	Ala	His	Ser	Gln	Ser	Leu	
			420					425					430			
Asp	Arg	Leu	Met	Asn	Pro	Leu	Ile	Asp	Gln	Tyr	Leu	Tyr	Phe	Leu	Ser	
		435					440					445				
Arg	Thr	Ile	Asn	Gly	Ser	Gly	Gln	Asn	Gln	Gln	Thr	Leu	Lys	Phe	Ser	
	450					455					460					
Val	Ala	Gly	Pro	Ser	Asn	Met	Ala	Val	Gln	Gly	Arg	Asn	Tyr	Ile	Pro	
465					470					475					480	
Gly	Pro	Ser	Tyr	Arg	Gln	Gln	Arg	Val	Ser	Thr	Thr	Val	Thr	Gln	Asn	
				485					490					495		
Asn	Asn	Ser	Glu	Phe	Ala	Trp	Pro	Gly	Ala	Ser	Ser	Trp	Ala	Leu	Asn	
			500					505					510			
Gly	Arg	Asn	Ser	Leu	Met	Asn	Pro	Gly	Pro	Ala	Met	Ala	Ser	His	Lys	
		515					520					525				
Glu	Gly	Glu	Asp	Arg	Phe	Phe	Pro	Leu	Ser	Gly	Ser	Leu	Ile	Phe	Gly	
	530					535					540					
Lys	Gln	Gly	Thr	Gly	Arg	Asp	Asn	Val	Asp	Ala	Asp	Lys	Val	Met	Ile	
545					550					555					560	
Thr	Asn	Glu	Glu	Glu	Ile	Lys	Thr	Thr	Asn	Pro	Val	Ala	Thr	Glu	Ser	
				565					570					575		
Tyr	Gly	Gln	Val	Ala	Thr	Asn	His	Gln	Ser	Ala	Gln	Ala	Gln	Ala	Gln	
			580					585					590			
Thr	Gly	Trp	Val	Gln	Asn	Gln	Gly	Val	Leu	Pro	Gly	Met	Val	Trp	Gln	
		595					600					605				
Asn	Arg	Asp	Val	Tyr	Leu	Gln	Gly	Pro	Ile	Trp	Ala	Lys	Ile	Pro	His	
	610					615					620					
Thr	Asp	Gly	Asn	Phe	His	Pro	Ser	Pro	Leu	Met	Gly	Gly	Phe	Gly	Leu	
625					630					635					640	

Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
645 650 655

Asp Pro Pro Thr Thr Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile Thr
660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln
675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn
690 695 700

Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Thr Glu Gly Val
705 710 715 720

Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Phe Leu Thr Arg Asn Leu
725 730 735

<210> 127
<211> 736
<212> PRT
<213> Adeno-Associated Virus

<400> 127

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Thr Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

Ala Ala Pro Ser Gly Val Gly Ser Asn Thr Met Ala Ser Gly Gly Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Ser Thr Ser Gly Gly Ser Ser Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Asp Asn Asn Gly Val Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asp
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Phe Leu Ser
435 440 445

Arg Thr Ile Asn Gly Ser Gly Gln Asn Gln Gln Thr Leu Gln Phe Ser
450 455 460

Val Ala Gly Pro Ser Asn Met Ala Val Gln Ala Arg Asn Trp Val Pro
465 470 475 480

Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Val Thr Gln Asn
485 490 495

Asn Asn Ser Glu Phe Ala Trp Pro Gly Ala Thr Lys Tyr His Leu Asn
500 505 510

Gly Arg Asp Ser Leu Met Asn Pro Gly Val Ala Met Ala Ser His Lys
515 520 525

Glu Gly Glu Asp Arg Phe Phe Pro Leu Ser Gly Val Leu Ile Phe Gly
530 535 540

Lys Gln Gly Thr Gly Arg Asp Asn Val Asp Ala Asp Lys Val Met Ile
545 550 555 560

Thr Asn Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu Glu
565 570 575

Tyr Gly Ala Val Ala Thr Asn His Gln Ser Ala Gln Ala Gln Ala Gln
580 585 590

Thr Gly Leu Val His Asn Gln Gly Val Leu Pro Gly Met Val Trp Gln
595 600 605

Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His
610 615 620

Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Leu
625 630 635 640

Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
645 650 655

Asp Pro Pro Thr Thr Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile Thr
660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln
675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn
690 695 700

Tyr Tyr Lys Ser Asn Asn Val Glu Phe Ala Val Asn Thr Glu Gly Val
705 710 715 720

Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Phe Leu Thr Arg Asn Leu
725 730 735

<210> 128

<211> 737

<212> PRT

<213> Adeno-Associated Virus

<400> 128

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro

35

40

45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
 50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
 65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
 85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
 100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
 115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
 130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
 145 150 155 160

Lys Thr Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
 165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
 180 185 190

Ala Ala Pro Ser Gly Val Gly Ser Asn Thr Met Ala Ser Gly Gly Gly
 195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
 210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
 225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
 245 250 255

Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp Asn
 260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Thr Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Phe Leu Ser
435 440 445

Arg Thr Gln Thr Thr Gly Gly Thr Ala Asn Thr Gln Thr Leu Gly Phe
450 455 460

Ser Gln Gly Gly Pro Asn Thr Met Ala Asn Gln Ala Lys Asn Trp Leu
465 470 475 480

Pro Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Thr Gly Gln
485 490 495

Asn Asn Asn Ser Asn Phe Ala Trp Thr Ala Gly Thr Lys Tyr His Leu

500					505					510					
Asn	Gly	Arg	Asn	Ser	Leu	Ala	Asn	Pro	Gly	Ile	Ala	Met	Ala	Thr	His
		515					520					525			
Lys	Asp	Asp	Glu	Glu	Arg	Phe	Phe	Pro	Ser	Asn	Gly	Ile	Leu	Ile	Phe
	530					535					540				
Gly	Lys	Gln	Asn	Ala	Ala	Arg	Asp	Asn	Ala	Asp	Tyr	Ser	Asp	Val	Met
545					550					555					560
Leu	Thr	Ser	Glu	Glu	Glu	Ile	Lys	Thr	Thr	Asn	Pro	Val	Ala	Thr	Glu
				565					570					575	
Glu	Tyr	Gly	Ile	Val	Ala	Asp	Asn	Leu	Gln	Gln	Gln	Asn	Thr	Ala	Pro
			580					585					590		
Gln	Ile	Gly	Thr	Val	Asn	Ser	Gln	Gly	Val	Leu	Pro	Gly	Met	Val	Trp
		595					600					605			
Gln	Asn	Arg	Asp	Val	Tyr	Leu	Gln	Gly	Pro	Ile	Trp	Ala	Lys	Ile	Pro
	610					615					620				
His	Thr	Asp	Gly	Asn	Phe	His	Pro	Ser	Pro	Leu	Met	Gly	Gly	Phe	Gly
625					630					635					640
Leu	Lys	His	Pro	Pro	Pro	Gln	Ile	Leu	Ile	Lys	Asn	Thr	Pro	Val	Pro
				645					650					655	
Ala	Asp	Pro	Pro	Thr	Thr	Phe	Asn	Gln	Ala	Lys	Leu	Asn	Ser	Phe	Ile
			660					665					670		
Thr	Gln	Tyr	Ser	Thr	Gly	Gln	Val	Ser	Val	Glu	Ile	Glu	Trp	Glu	Leu
		675					680					685			
Gln	Lys	Glu	Asn	Ser	Lys	Arg	Trp	Asn	Pro	Glu	Ile	Gln	Tyr	Thr	Ser
	690					695					700				
Asn	Tyr	Tyr	Lys	Ser	Thr	Asn	Val	Asp	Phe	Ala	Val	Asn	Thr	Glu	Gly
705					710					715					720
Val	Tyr	Ser	Glu	Pro	Arg	Pro	Ile	Gly	Thr	Arg	Phe	Leu	Thr	Arg	Asn
				725					730					735	

Leu

<210> 129
<211> 736
<212> PRT
<213> Adeno-Associated Virus

<400> 129

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln His Gln Asp Asn Ala Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Gly Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Leu Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ala Gly Ile Gly
145 150 155 160

Lys Ser Gly Ala Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Thr Glu Ser Val Pro Asp Pro Gln Pro Ile Gly Glu Pro Pro
180 185 190

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

Ala Pro Val Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Gln Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp Asn
260 265 270

Ala Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Thr Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Asp Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Glu Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr Glu
405 410 415

Phe Glu Asn Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Phe Leu Ser
435 440 445

Arg Thr Gln Thr Thr Gly Thr Ala Gly Thr Gln Thr Leu Lys Phe Ser
450 455 460

Val Ala Gly Pro Ser Asn Met Ala Val Gln Gly Arg Asn Tyr Ile Pro
465 470 475 480

Gly Pro Ser Tyr Arg Gln Gln Arg Val Ser Thr Thr Thr Asn Gln Asn
485 490 495

Asn Asn Ser Asn Phe Ala Trp Thr Gly Ala Ser Ser Trp Ala Leu Asn
500 505 510

Gly Arg Asn Ser Leu Met Asn Pro Gly Pro Ala Met Ala Ser His Lys
515 520 525

Asp Asp Glu Asp Arg Phe Phe Pro Ser Ser Gly Ser Leu Ile Phe Gly
530 535 540

Lys Gln Gly Ala Gly Asn Asp Asn Val Asp Tyr Ser Gln Val Met Ile
545 550 555 560

Thr Asn Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu Ser
565 570 575

Tyr Gly Gln Val Ala Thr Asn Asn Gln Ser Ala Asn Thr Gln Ala Gln
580 585 590

Thr Gly Trp Val Gln Asn Gln Gly Ile Leu Pro Gly Met Val Trp Gln
595 600 605

Asp Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His
610 615 620

Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Met
625 630 635 640

Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
645 650 655

Asp Pro Pro Thr Ala Phe Asn Lys Asp Lys Leu Asn Ser Phe Ile Thr
660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln
675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn
690 695 700

Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Thr Glu Gly Val
705 710 715 720

Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Phe Leu Thr Arg Asn Leu
725 730 735

<210> 130

<211> 736

<212> PRT

<213> Adeno-Associated Virus

<400> 130

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln His Gln Asp Asn Ala Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Gly Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Leu Leu Glu Pro

115								120							125
Leu	Gly	Leu	Val	Glu	Glu	Ala	Ala	Lys	Thr	Ala	Pro	Gly	Lys	Lys	Arg
130						135					140				
Pro	Val	Glu	Gln	Ser	Pro	Gln	Glu	Pro	Asp	Ser	Ser	Ala	Gly	Ile	Gly
145					150					155					160
Lys	Ser	Gly	Ala	Gln	Pro	Ala	Lys	Lys	Arg	Leu	Asn	Phe	Gly	Gln	Thr
				165					170					175	
Gly	Asp	Thr	Glu	Ser	Val	Pro	Asp	Pro	Gln	Pro	Ile	Gly	Glu	Pro	Pro
			180					185					190		
Ala	Ala	Pro	Ser	Gly	Val	Gly	Ser	Leu	Thr	Met	Ala	Ser	Gly	Gly	Gly
		195					200					205			
Ala	Pro	Val	Ala	Asp	Asn	Asn	Glu	Gly	Ala	Asp	Gly	Val	Gly	Ser	Ser
210						215					220				
Ser	Gly	Asn	Trp	His	Cys	Asp	Ser	Gln	Trp	Leu	Gly	Asp	Arg	Val	Ile
225					230					235					240
Thr	Thr	Ser	Thr	Arg	Thr	Trp	Ala	Leu	Pro	Thr	Tyr	Asn	Asn	His	Leu
				245					250					255	
Tyr	Lys	Gln	Ile	Ser	Asn	Ser	Thr	Ser	Gly	Gly	Ser	Ser	Asn	Asp	Asn
			260					265					270		
Ala	Tyr	Phe	Gly	Tyr	Ser	Thr	Pro	Trp	Gly	Tyr	Phe	Asp	Phe	Asn	Arg
		275					280					285			
Phe	His	Cys	His	Phe	Ser	Pro	Arg	Asp	Trp	Gln	Arg	Leu	Ile	Asn	Asn
290						295					300				
Asn	Trp	Gly	Phe	Arg	Pro	Lys	Arg	Leu	Asn	Phe	Lys	Leu	Phe	Asn	Ile
305					310					315					320
Gln	Val	Lys	Glu	Val	Thr	Asp	Asn	Asn	Gly	Val	Lys	Thr	Ile	Ala	Asn
				325					330					335	
Asn	Leu	Thr	Ser	Thr	Val	Gln	Val	Phe	Thr	Asp	Ser	Asp	Tyr	Gln	Leu
			340					345					350		

Pro Tyr Val Leu Gly Ser Ala His Glu Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asp
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr Glu
405 410 415

Phe Glu Asn Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Phe Leu Ser
435 440 445

Arg Thr Gln Thr Thr Gly Thr Ala Gly Thr Gln Thr Leu Gln Phe Ser
450 455 460

Gln Ala Gly Pro Ser Ser Met Ala Asn Gln Ala Arg Asn Trp Val Pro
465 470 475 480

Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Thr Asn Gln Asn
485 490 495

Asn Asn Ser Asn Phe Ala Trp Thr Gly Ala Thr Lys Tyr His Leu Asn
500 505 510

Gly Arg Asp Ser Leu Met Asn Pro Gly Val Ala Met Ala Ser His Lys
515 520 525

Asp Asp Glu Asp Arg Phe Phe Pro Ser Ser Gly Val Leu Ile Phe Gly
530 535 540

Lys Gln Gly Ala Gly Asn Asp Asn Val Asp Tyr Ser Gln Val Met Ile
545 550 555 560

Thr Asn Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu Glu
565 570 575

Tyr Gly Ala Val Ala Thr Asn Asn Gln Ser Ala Asn Thr Gln Ala Gln

580

585

590

Thr Gly Leu Val His Asn Gln Gly Ile Leu Pro Gly Met Val Trp Gln
 595 600 605

Asp Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His
 610 615 620

Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Met
 625 630 635 640

Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
 645 650 655

Asp Pro Pro Thr Ala Phe Asn Lys Asp Lys Leu Asn Ser Phe Ile Thr
 660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln
 675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn
 690 695 700

Tyr Tyr Lys Ser Asn Asn Val Glu Phe Ala Val Asn Thr Glu Gly Val
 705 710 715 720

Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Phe Leu Thr Arg Asn Leu
 725 730 735

<210> 131

<211> 737

<212> PRT

<213> Adeno-Associated Virus

<400> 131

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
 1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
 20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
 35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Pro Ser Pro Gln Arg Ser Pro Asp Ser Ser Thr Gly Ile
145 150 155 160

Gly Lys Lys Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln
165 170 175

Thr Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro
180 185 190

Pro Ala Ala Pro Ser Gly Val Gly Pro Asn Thr Met Ala Ala Gly Gly
195 200 205

Gly Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser
210 215 220

Ser Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val
225 230 235 240

Ile Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His
245 250 255

Leu Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp
260 265 270

Asn Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn
275 280 285

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Arg Leu Ser Phe Lys Leu Phe Asn
305 310 315 320

Ile Gln Val Lys Glu Val Thr Thr Asn Glu Gly Thr Lys Thr Ile Ala
325 330 335

Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln
340 345 350

Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe
355 360 365

Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn
370 375 380

Asn Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr
385 390 395 400

Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Thr Tyr
405 410 415

Thr Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser
420 425 430

Leu Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Phe Leu
435 440 445

Ser Arg Thr Gln Thr Thr Gly Thr Ala Gly Thr Gln Thr Leu Gly Phe
450 455 460

Ser Gln Gly Gly Pro Asn Thr Met Ala Asn Gln Ala Lys Asn Trp Leu
465 470 475 480

Pro Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Thr Asn Gln
485 490 495

Asn Asn Asn Ser Asn Phe Ala Trp Thr Gly Gly Thr Lys Tyr His Leu
500 505 510

Asn Gly Arg Asn Ser Leu Ala Asn Pro Gly Ile Ala Met Ala Thr His
515 520 525

Lys Asp Asp Glu Asp Arg Phe Phe Pro Ser Ser Gly Ile Leu Ile Phe
530 535 540

Gly Lys Gln Gly Ala Gly Asn Asp Asn Val Asp Tyr Ser Gln Val Met
545 550 555 560

Leu Thr Ser Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu
565 570 575

Glu Tyr Gly Ile Val Ala Thr Asn Asn Gln Ser Ala Asn Thr Gln Ala
580 585 590

Gln Thr Gly Thr Val Asn Ser Gln Gly Ala Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Thr Phe Asn Gln Ser Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Thr Glu Gly
705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Phe Leu Thr Arg Asn
725 730 735

Leu

<210> 132
<211> 737
<212> PRT
<213> Adeno-Associated Virus

<400> 132

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Pro Ser Pro Gln Arg Ser Pro Asp Ser Ser Thr Gly Ile
145 150 155 160

Gly Lys Lys Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln
165 170 175

Thr Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro
180 185 190

Pro Ala Ala Pro Ser Gly Val Gly Pro Asn Thr Met Ala Ala Gly Gly

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

Leu Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Phe Leu
435 440 445

Ser Arg Thr Gln Thr Thr Gly Thr Ala Gly Thr Gln Thr Leu Gln Phe
450 455 460

Ser Gln Ala Gly Pro Ser Ser Met Ala Asn Gln Ala Arg Asn Trp Val
465 470 475 480

Pro Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Thr Asn Gln
485 490 495

Asn Asn Asn Ser Asn Phe Ala Trp Thr Gly Ala Thr Lys Tyr His Leu
500 505 510

Asn Gly Arg Asp Ser Leu Met Asn Pro Gly Val Ala Met Ala Ser His
515 520 525

Lys Asp Asp Glu Asp Arg Phe Phe Pro Ser Ser Gly Val Leu Ile Phe
530 535 540

Gly Lys Gln Gly Ala Gly Asn Asp Asn Val Asp Tyr Ser Gln Val Met
545 550 555 560

Ile Thr Asn Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu
565 570 575

Glu Tyr Gly Ala Val Ala Thr Asn Asn Gln Ser Ala Asn Thr Gln Ala
580 585 590

Gln Thr Gly Leu Val His Asn Gln Gly Ala Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Thr Phe Asn Gln Ser Lys Leu Asn Ser Phe Ile

660

665

670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
 675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
 690 695 700

Asn Tyr Tyr Lys Ser Thr Ser Val Asp Phe Ala Val Asn Thr Glu Gly
 705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Phe Leu Thr Arg Asn
 725 730 735

Leu

<210> 133

<211> 737

<212> PRT

<213> Adeno-Associated Virus

<400> 133

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
 1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
 35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
 50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
 65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
 85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
 100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Thr Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

Ala Ala Pro Ser Gly Val Gly Ser Asn Thr Met Ala Ser Gly Gly Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ala Thr Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Gln Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Phe Leu Ser
435 440 445

Arg Thr Gln Thr Thr Gly Gly Thr Ala Asn Thr Gln Thr Leu Gln Phe
450 455 460

Ser Gln Ala Gly Pro Ser Ser Met Ala Asn Gln Ala Arg Asn Trp Val
465 470 475 480

Pro Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Thr Gly Gln
485 490 495

Asn Asn Asn Ser Asn Phe Ala Trp Thr Ala Ala Thr Lys Tyr His Leu
500 505 510

Asn Gly Arg Asp Ser Leu Met Asn Pro Gly Val Ala Met Ala Ser His
515 520 525

Lys Asp Asp Glu Glu Arg Phe Phe Pro Ser Asn Gly Val Leu Ile Phe
530 535 540

Gly Lys Gln Asn Ala Ala Arg Asp Asn Ala Asp Tyr Ser Asp Val Met
545 550 555 560

Ile Thr Asn Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu
565 570 575

Glu Tyr Gly Ala Val Ala Asp Asn Leu Gln Gln Gln Asn Thr Ala Pro
580 585 590

Gln Ile Gly Leu Val His Asn Gln Gly Val Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Thr Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Tyr Lys Ser Thr Ser Val Asp Phe Ala Val Asn Thr Glu Gly
705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Phe Leu Thr Arg Asn
725 730 735

Leu

<210> 134
<211> 737
<212> PRT
<213> Adeno-Associated Virus

<400> 134

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Pro Ser Pro Gln Arg Ser Pro Asp Ser Ser Thr Gly Ile
145 150 155 160

Gly Lys Lys Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln
165 170 175

Thr Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro
180 185 190

Pro Ala Ala Pro Ser Gly Val Gly Pro Asn Thr Met Ala Ala Gly Gly
195 200 205

Gly Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser
210 215 220

Ser Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val
225 230 235 240

Ile Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His
245 250 255

Leu Tyr Lys Gln Ile Ser Ser Ala Ser Thr Gly Ala Ser Asn Asp Asn

260

265

270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
 275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
 290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Ser Phe Lys Leu Phe Asn Ile
 305 310 315 320

Gln Val Lys Glu Val Thr Thr Asn Asp Gly Val Thr Thr Ile Ala Asn
 325 330 335

Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
 340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
 355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
 370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
 385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Thr Tyr Thr
 405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
 420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser
 435 440 445

Arg Thr Gln Asn Gln Ser Gly Ser Ala Gln Asn Lys Asp Leu Gly Phe
 450 455 460

Ser Gln Gly Gly Pro Asn Thr Met Ala Asn Gln Ala Lys Asn Trp Leu
 465 470 475 480

Pro Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Lys Thr Asp
 485 490 495

Asn Asn Asn Ser Asn Phe Thr Trp Thr Gly Ala Thr Lys Tyr His Leu
500 505 510

Asn Gly Arg Asn Ser Leu Ala Asn Pro Gly Ile Ala Met Ala Ser His
515 520 525

Lys Asp Asp Lys Asp Lys Phe Phe Pro Met Ser Gly Ile Leu Ile Phe
530 535 540

Gly Lys Glu Ser Ala Gly Ala Ser Asn Thr Ala Leu Asp Asn Val Met
545 550 555 560

Leu Thr Ser Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu
565 570 575

Glu Tyr Gly Ile Val Ala Val Asn Leu Gln Ser Ser Ser Thr Asp Pro
580 585 590

Ala Thr Gly Thr Val Asn Ser Gln Gly Ala Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Thr Phe Asn Gln Ser Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Ala Lys Ser Ala Asn Val Asp Phe Ala Val Asn Thr Glu Gly
705 710 715 720

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

725

730

735

Leu

<210> 135

<211> 737

<212> PRT

<213> Adeno-Associated Virus

<400> 135

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
 1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
 20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
 35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
 50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
 65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
 85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
 100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
 115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
 130 135 140

Pro Val Glu Pro Ser Pro Gln Arg Ser Pro Asp Ser Ser Thr Gly Ile
 145 150 155 160

Gly Lys Lys Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln
 165 170 175

Thr Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro
180 185 190

Pro Ala Ala Pro Ser Gly Val Gly Pro Asn Thr Met Ala Ala Gly Gly
195 200 205

Gly Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser
210 215 220

Ser Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val
225 230 235 240

Ile Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His
245 250 255

Leu Tyr Lys Gln Ile Ser Ser Ala Ser Thr Gly Ala Ser Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Ser Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Thr Asn Asp Gly Val Thr Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Thr Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser
435 440 445

Arg Thr Gln Asn Gln Ser Gly Ser Ala Gln Asn Lys Asp Leu Gly Phe
450 455 460

Ser Arg Gly Ser Pro Ala Gly Met Ser Val Gln Ala Lys Asn Trp Leu
465 470 475 480

Pro Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Lys Thr Asp
485 490 495

Asn Asn Asn Ser Asn Phe Thr Trp Thr Gly Ala Thr Lys Tyr His Leu
500 505 510

Asn Gly Arg Asn Ser Leu Ala Asn Pro Gly Ile Ala Met Ala Ser His
515 520 525

Lys Asp Asp Lys Asp Lys Phe Phe Pro Met Ser Gly Ile Leu Ile Phe
530 535 540

Gly Lys Glu Ser Ala Gly Ala Ser Asn Thr Ala Leu Asp Asn Val Met
545 550 555 560

Leu Thr Ser Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu
565 570 575

Glu Tyr Gly Ile Val Ala Val Asn Leu Gln Ser Ser Ser Thr Asp Pro
580 585 590

Ala Thr Gly Thr Val Asn Ser Gln Gly Ala Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Thr Phe Asn Gln Ser Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Ala Lys Ser Ala Asn Val Asp Phe Ala Val Asn Thr Glu Gly
705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn
725 730 735

Leu

<210> 136
<211> 737
<212> PRT
<213> Adeno-Associated Virus

<400> 136

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Pro Ser Pro Gln Arg Ser Pro Asp Ser Ser Thr Gly Ile
145 150 155 160

Gly Lys Lys Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln
165 170 175

Thr Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro
180 185 190

Pro Ala Ala Pro Ser Gly Val Gly Pro Asn Thr Met Ala Ala Gly Gly
195 200 205

Gly Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser
210 215 220

Ser Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val
225 230 235 240

Ile Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His
245 250 255

Leu Tyr Lys Gln Ile Ser Ser Ala Ser Thr Gly Ala Ser Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Ser Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Thr Asn Asp Gly Val Thr Thr Ile Ala Asn

325

330

335

Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
 340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
 355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
 370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
 385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Thr Tyr Thr
 405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
 420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Asn
 435 440 445

Arg Thr Gln Asn Gln Ser Gly Ser Ala Gln Asn Lys Asp Leu Leu Phe
 450 455 460

Ser Arg Gly Ser Pro Ala Gly Met Ser Val Gln Pro Lys Asn Trp Leu
 465 470 475 480

Pro Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Lys Thr Asp
 485 490 495

Asn Asn Asn Ser Asn Phe Thr Trp Thr Gly Ala Ser Lys Tyr Asn Leu
 500 505 510

Asn Gly Arg Glu Ser Ile Ile Asn Pro Gly Thr Ala Met Ala Ser His
 515 520 525

Lys Asp Asp Lys Asp Lys Phe Phe Pro Met Ser Gly Val Met Ile Phe
 530 535 540

Gly Lys Glu Ser Ala Gly Ala Ser Asn Thr Ala Leu Asp Asn Val Met
 545 550 555 560

Ile Thr Asp Glu Glu Glu Ile Lys Ala Thr Asn Pro Val Ala Thr Glu
565 570 575

Arg Phe Gly Thr Val Ala Val Asn Leu Gln Ser Ser Ser Thr Asp Pro
580 585 590

Ala Thr Gly Asp Val His Val Met Gly Ala Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Thr Phe Asn Gln Ser Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Ala Lys Ser Ala Asn Val Asp Phe Ala Val Asn Thr Glu Gly
705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn
725 730 735

Leu

<210> 137
<211> 737
<212> PRT
<213> Adeno-Associated Virus

<400> 137

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Pro Ser Pro Gln Arg Ser Pro Asp Ser Ser Thr Gly Ile
145 150 155 160

Gly Lys Lys Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln
165 170 175

Thr Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro
180 185 190

Pro Ala Ala Pro Ser Gly Val Gly Pro Asn Thr Met Ala Ala Gly Gly
195 200 205

Gly Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser
210 215 220

Ser Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val
225 230 235 240

Ile Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His
245 250 255

Leu Tyr Lys Gln Ile Ser Asn Ser Thr Ser Gly Gly Ser Ser Asn Asp
260 265 270

Asn Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn
275 280 285

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Arg Leu Ser Phe Lys Leu Phe Asn
305 310 315 320

Ile Gln Val Lys Glu Val Thr Asp Asn Asn Gly Val Lys Thr Ile Ala
325 330 335

Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln
340 345 350

Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe
355 360 365

Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn
370 375 380

Asp Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr
385 390 395 400

Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Thr Tyr
405 410 415

Thr Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser
420 425 430

Leu Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu
435 440 445

Ser Arg Thr Ile Asn Gly Ser Gly Gln Asn Gln Gln Thr Leu Gly Phe
450 455 460

Ser Val Ala Gly Pro Ala Asn Met Ala Val Gln Gly Arg Asn Trp Leu
465 470 475 480

Pro Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Val Thr Gln
485 490 495

Asn Asn Asn Ser Glu Phe Ala Trp Pro Gly Gly Thr Lys Tyr His Leu
500 505 510

Asn Gly Arg Asn Ser Leu Ala Asn Pro Gly Ile Ala Met Ala Thr His
515 520 525

Lys Glu Gly Glu Asp Arg Phe Phe Pro Leu Ser Gly Ile Leu Ile Phe
530 535 540

Gly Lys Gln Gly Thr Gly Arg Asp Asn Val Asp Ala Asp Lys Val Met
545 550 555 560

Leu Thr Ser Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu
565 570 575

Glu Tyr Gly Ile Val Ala Thr Asn His Gln Ser Ala Gln Ala Gln Ala
580 585 590

Gln Thr Gly Thr Val Asn Ser Gln Gly Ala Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Thr Phe Asn Gln Ser Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Tyr Lys Ser Asn Asn Val Glu Phe Ala Val Asn Thr Glu Gly
705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn
725 730 735

Leu

<210> 138
<211> 737
<212> PRT
<213> Adeno-Associated Virus

<400> 138

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Pro Ser Pro Gln Arg Ser Pro Asp Ser Ser Thr Gly Ile
145 150 155 160

Gly Lys Lys Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln
165 170 175

Thr Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro
180 185 190

Pro Ala Ala Pro Ser Gly Val Gly Pro Asn Thr Met Ala Ala Gly Gly
195 200 205

Gly Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser
210 215 220

Ser Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val
225 230 235 240

Ile Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His
245 250 255

Leu Tyr Lys Gln Ile Ser Asn Ser Thr Ser Gly Gly Ser Ser Asn Asp
260 265 270

Asn Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn
275 280 285

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Arg Leu Ser Phe Lys Leu Phe Asn
305 310 315 320

Ile Gln Val Lys Glu Val Thr Asp Asn Asn Gly Val Lys Thr Ile Ala
325 330 335

Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln
340 345 350

Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe
355 360 365

Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn
370 375 380

Asp Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr

385						390						395				400
Phe	Pro	Ser	Gln	Met	Leu	Arg	Thr	Gly	Asn	Asn	Phe	Gln	Phe	Thr	Tyr	
				405					410					415		
Thr	Phe	Glu	Asp	Val	Pro	Phe	His	Ser	Ser	Tyr	Ala	His	Ser	Gln	Ser	
			420					425					430			
Leu	Asp	Arg	Leu	Met	Asn	Pro	Leu	Ile	Asp	Gln	Tyr	Leu	Tyr	Tyr	Leu	
		435					440					445				
Ser	Arg	Thr	Ile	Asn	Gly	Ser	Gly	Gln	Asn	Gln	Gln	Thr	Leu	Gly	Phe	
	450					455					460					
Ser	Val	Ala	Gly	Pro	Thr	Asn	Met	Ala	Val	Gln	Gly	Arg	Asn	Trp	Leu	
465					470					475					480	
Pro	Gly	Pro	Cys	Tyr	Arg	Gln	Gln	Arg	Val	Ser	Thr	Thr	Val	Thr	Gln	
				485					490					495		
Asn	Asn	Asn	Ser	Glu	Phe	Ala	Trp	Pro	Gly	Gly	Thr	Lys	Tyr	His	Leu	
			500					505					510			
Asn	Gly	Arg	Asn	Ser	Leu	Ala	Asn	Pro	Gly	Ile	Ala	Met	Ala	Thr	His	
		515					520					525				
Lys	Glu	Gly	Glu	Asp	Arg	Phe	Phe	Pro	Leu	Ser	Gly	Ile	Leu	Ile	Phe	
	530					535					540					
Gly	Lys	Gln	Gly	Thr	Gly	Arg	Asp	Asn	Val	Asp	Ala	Asp	Lys	Val	Met	
545					550					555					560	
Leu	Thr	Ser	Glu	Glu	Glu	Ile	Lys	Thr	Thr	Asn	Pro	Val	Ala	Thr	Glu	
			565					570						575		
Glu	Tyr	Gly	Ile	Val	Ala	Thr	Asn	His	Gln	Ser	Ala	Gln	Ala	Gln	Ala	
			580				585					590				
Gln	Thr	Gly	Thr	Val	Asn	Ser	Gln	Gly	Ala	Leu	Pro	Gly	Met	Val	Trp	
		595					600					605				
Gln	Asn	Arg	Asp	Val	Tyr	Leu	Gln	Gly	Pro	Ile	Trp	Ala	Lys	Ile	Pro	
	610					615					620					

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Thr Phe Asn Gln Ser Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Tyr Lys Ser Asn Asn Val Glu Phe Ala Val Asn Thr Glu Gly
705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn
725 730 735

Leu

<210> 139
<211> 737
<212> PRT
<213> Adeno-Associated Virus

<400> 139

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Pro Ser Pro Gln Arg Ser Pro Asp Ser Ser Thr Gly Ile
145 150 155 160

Gly Lys Lys Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln
165 170 175

Thr Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro
180 185 190

Pro Ala Ala Pro Ser Gly Val Gly Pro Asn Thr Met Ala Ala Gly Gly
195 200 205

Gly Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser
210 215 220

Ser Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val
225 230 235 240

Ile Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His
245 250 255

Leu Tyr Lys Gln Ile Ser Asn Ser Thr Ser Gly Gly Ser Ser Asn Asp
260 265 270

Asn Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn
275 280 285

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Arg Leu Ser Phe Lys Leu Phe Asn
305 310 315 320

Ile Gln Val Lys Glu Val Thr Asp Asn Asn Gly Val Lys Thr Ile Ala
325 330 335

Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln
340 345 350

Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe
355 360 365

Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn
370 375 380

Asp Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr
385 390 395 400

Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Thr Tyr
405 410 415

Thr Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser
420 425 430

Leu Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu
435 440 445

Ser Arg Thr Ile Asn Gly Ser Gly Gln Asn Gln Gln Thr Leu Gly Phe
450 455 460

Ser Val Ala Gly Pro Ser Asn Ala Ala Val Gln Gly Arg Asn Trp Leu
465 470 475 480

Pro Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Val Thr Gln
485 490 495

Asn Asn Asn Ser Glu Phe Ala Trp Pro Gly Gly Thr Lys Tyr His Leu
500 505 510

Asn Gly Arg Asn Ser Leu Ala Asn Pro Gly Ile Ala Met Ala Thr His
515 520 525

Lys Glu Gly Glu Asp Arg Phe Phe Pro Leu Ser Gly Ile Leu Ile Phe
530 535 540

Gly Lys Gln Gly Thr Gly Arg Asp Asn Val Asp Ala Asp Lys Val Met
545 550 555 560

Leu Thr Ser Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu
565 570 575

Glu Tyr Gly Ile Val Ala Thr Asn His Gln Ser Ala Gln Ala Gln Ala
580 585 590

Gln Thr Gly Thr Val Asn Ser Gln Gly Ala Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Thr Phe Asn Gln Ser Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Tyr Lys Ser Asn Asn Val Glu Phe Ala Val Asn Thr Glu Gly
705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn
725 730 735

Leu

<210> 140
<211> 737
<212> PRT
<213> Adeno-Associated Virus

<400> 140

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Pro Ser Pro Gln Arg Ser Pro Asp Ser Ser Thr Gly Ile
145 150 155 160

Gly Lys Lys Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln
165 170 175

Thr Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro
180 185 190

Pro Ala Ala Pro Ser Gly Val Gly Pro Asn Thr Met Ala Ala Gly Gly
195 200 205

Gly Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser
210 215 220

Ser Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val
225 230 235 240

Ile Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His
245 250 255

Leu Tyr Lys Gln Ile Ser Asn Ser Thr Ser Gly Gly Ser Ser Asn Asp
260 265 270

Asn Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn
275 280 285

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Arg Leu Ser Phe Lys Leu Phe Asn
305 310 315 320

Ile Gln Val Lys Glu Val Thr Asp Asn Asn Gly Val Lys Thr Ile Ala
325 330 335

Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln
340 345 350

Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe
355 360 365

Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn
370 375 380

Asp Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr
385 390 395 400

Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Thr Tyr
405 410 415

Thr Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser
420 425 430

Leu Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu
435 440 445

Ser Arg Thr Ile Asn Gly Ser Gly Gln Asn Gln Gln Thr Leu Gly Phe

450		455		460
Ser Val Ala Gly Pro Ser Asn Ile Ala Val Gln Gly Arg Asn Trp Leu				
465		470		475
Pro Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Val Thr Gln				
		485		490
Asn Asn Asn Ser Glu Phe Ala Trp Pro Gly Gly Thr Lys Tyr His Leu				
		500		505
Asn Gly Arg Asn Ser Leu Ala Asn Pro Gly Ile Ala Met Ala Thr His				
		515		520
Lys Glu Gly Glu Asp Arg Phe Phe Pro Leu Ser Gly Ile Leu Ile Phe				
		530		535
Gly Lys Gln Gly Thr Gly Arg Asp Asn Val Asp Ala Asp Lys Val Met				
545		550		555
Leu Thr Ser Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu				
		565		570
Glu Tyr Gly Ile Val Ala Thr Asn His Gln Ser Ala Gln Ala Gln Ala				
		580		585
Gln Thr Gly Thr Val Asn Ser Gln Gly Ala Leu Pro Gly Met Val Trp				
		595		600
Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro				
		610		615
His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly				
625		630		635
Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro				
		645		650
Ala Asp Pro Pro Thr Thr Phe Asn Gln Ser Lys Leu Asn Ser Phe Ile				
		660		665
Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu				
		675		680
				685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Tyr Lys Ser Asn Asn Val Glu Phe Ala Val Asn Thr Glu Gly
705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn
725 730 735

Leu

<210> 141
<211> 737
<212> PRT
<213> Adeno-Associated Virus

<400> 141

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Pro Ser Pro Gln Arg Ser Pro Asp Ser Ser Thr Gly Ile
145 150 155 160

Gly Lys Lys Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln
165 170 175

Thr Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro
180 185 190

Pro Ala Ala Pro Ser Gly Val Gly Pro Asn Thr Met Ala Ala Gly Gly
195 200 205

Gly Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser
210 215 220

Ser Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val
225 230 235 240

Ile Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His
245 250 255

Leu Tyr Lys Gln Ile Ser Asn Ser Thr Ser Gly Gly Ser Ser Asn Asp
260 265 270

Asn Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn
275 280 285

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Arg Leu Ser Phe Lys Leu Phe Asn
305 310 315 320

Ile Gln Val Lys Glu Val Thr Asp Asn Asn Gly Val Lys Thr Ile Ala
325 330 335

Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln
340 345 350

Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe
355 360 365

Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn
370 375 380

Asp Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr
385 390 395 400

Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Thr Tyr
405 410 415

Thr Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser
420 425 430

Leu Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu
435 440 445

Ser Arg Thr Ile Asn Gly Ser Gly Gln Asn Gln Gln Thr Leu Gly Phe
450 455 460

Ser Val Ala Gly Pro Ser Asn Lys Ala Val Gln Gly Arg Asn Trp Leu
465 470 475 480

Pro Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Val Thr Gln
485 490 495

Asn Asn Asn Ser Glu Phe Ala Trp Pro Gly Gly Thr Lys Tyr His Leu
500 505 510

Asn Gly Arg Asn Ser Leu Ala Asn Pro Gly Ile Ala Met Ala Thr His
515 520 525

Lys Glu Gly Glu Asp Arg Phe Phe Pro Leu Ser Gly Ile Leu Ile Phe
530 535 540

Gly Lys Gln Gly Thr Gly Arg Asp Asn Val Asp Ala Asp Lys Val Met
545 550 555 560

Leu Thr Ser Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu
565 570 575

Glu Tyr Gly Ile Val Ala Thr Asn His Gln Ser Ala Gln Ala Gln Ala
580 585 590

Gln Thr Gly Thr Val Asn Ser Gln Gly Ala Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Thr Phe Asn Gln Ser Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Tyr Lys Ser Asn Asn Val Glu Phe Ala Val Asn Thr Glu Gly
705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn
725 730 735

Leu

<210> 142

<211> 737

<212> PRT

<213> Adeno-Associated Virus

<400> 142

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro

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

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Arg Leu Ser Phe Lys Leu Phe Asn
305 310 315 320

Ile Gln Val Lys Glu Val Thr Asp Asn Asn Gly Val Lys Thr Ile Ala
325 330 335

Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln
340 345 350

Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe
355 360 365

Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn
370 375 380

Asp Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr
385 390 395 400

Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Thr Tyr
405 410 415

Thr Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser
420 425 430

Leu Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu
435 440 445

Ser Arg Thr Ile Asn Gly Ser Gly Gln Asn Gln Gln Thr Leu Gly Phe
450 455 460

Ser Val Ala Gly Ala Ser Asn Met Ala Val Gln Gly Arg Asn Trp Leu
465 470 475 480

Pro Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Val Thr Gln
485 490 495

Asn Asn Asn Ser Glu Phe Ala Trp Pro Gly Gly Thr Lys Tyr His Leu
500 505 510

Asn Gly Arg Asn Ser Leu Ala Asn Pro Gly Ile Ala Met Ala Thr His

[illegible]

<210> 143
<211> 736
<212> PRT
<213> Adeno-Associated Virus

<400> 143

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Thr Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

Ala Ala Pro Ser Gly Val Gly Ser Asn Thr Met Ala Ser Gly Gly Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Ser Thr Ser Gly Gly Ser Ser Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Asp Asn Asn Gly Val Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asp
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Phe Leu Ser
435 440 445

Arg Thr Ile Asn Gly Ser Gly Gln Asn Gln Gln Thr Leu Gln Phe Ser
450 455 460

Gln Ala Gly Pro Ser Ser Met Ala Asn Gln Ala Arg Asn Trp Val Pro
465 470 475 480

Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Val Thr Gln Asn
485 490 495

Asn Asn Ser Glu Phe Ala Trp Pro Gly Ala Thr Lys Tyr His Leu Asn
500 505 510

Gly Arg Asp Ser Leu Met Asn Pro Gly Val Ala Met Ala Ser His Lys
515 520 525

Glu Gly Glu Asp Arg Phe Phe Pro Leu Ser Gly Val Leu Ile Phe Gly
530 535 540

Lys Gln Gly Thr Gly Arg Asp Asn Val Asp Ala Asp Lys Val Met Ile
545 550 555 560

Thr Asn Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu Glu
565 570 575

Tyr Gly Ala Val Ala Thr Asn His Gln Arg Gly Asn Arg Gln Ala Gln
580 585 590

Thr Gly Leu Val His Asn Gln Gly Val Leu Pro Gly Met Val Trp Gln
595 600 605

Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His
610 615 620

Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Leu
625 630 635 640

Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala
645 650 655

Asp Pro Pro Thr Thr Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile Thr
660 665 670

Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln
675 680 685

Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn
690 695 700

Tyr Tyr Lys Ser Asn Asn Val Glu Phe Ala Val Asn Thr Glu Gly Val
705 710 715 720

Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Phe Leu Thr Arg Asn Leu
725 730 735

<210> 144
<211> 734
<212> PRT
<213> Adeno-Associated Virus

<400> 144

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg

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

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Arg
370 375 380

Asp Asn Thr Glu Asn Pro Thr Glu Arg Ser Ser Phe Tyr Cys Leu Glu
385 390 395 400

Tyr Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Thr
405 410 415

Tyr Thr Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln
420 425 430

Ser Leu Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr
435 440 445

Leu Ser Arg Thr Asn Thr Gly Gly Val Gln Phe Ser Gln Gly Gly Pro
450 455 460

Asn Thr Met Ala Asn Gln Ala Lys Asn Trp Leu Pro Gly Pro Cys Tyr
465 470 475 480

Arg Gln Gln Gly Trp Asn Leu Gly Ser Gly Val Asn Arg Ala Ser Val
485 490 495

Ser Ala Phe Ala Thr Gly Thr Lys Tyr His Leu Asn Gly Arg Asn Ser
500 505 510

Leu Ala Asn Pro Gly Ile Ala Met Ala Thr Asn Asn Leu Gln Gly Ser
515 520 525

Asn Thr Tyr Ala Leu Glu Asn Thr Leu Ile Phe Asn Ser Gln Pro Ala
530 535 540

Asn Pro Gly Thr Thr Ala Thr Tyr Leu Glu Gly Asn Met Leu Thr Ser
545 550 555 560

Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu Glu Tyr Gly
565 570 575

Ile Val Ala Thr Asn Asn Gln Ser Ser Thr Thr Ala Pro Ala Thr Gly
580 585 590

Thr Val Asn Ser Gln Gly Ala Leu Pro Gly Met Val Trp Gln Asn Arg

595

600

605

Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp
610 615 620

Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His
625 630 635 640

Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala Asp Pro
645 650 655

Pro Thr Thr Phe Asn Gln Ser Lys Leu Asn Ser Phe Ile Thr Gln Tyr
660 665 670

Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu
675 680 685

Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn
690 695 700

Asp Pro Gln Phe Val Asp Phe Ala Val Asn Thr Glu Gly Val Tyr Ser
705 710 715 720

Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
725 730

<210> 145

<211> 733

<212> PRT

<213> Adeno-Associated Virus

<400> 145

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Thr Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

Ala Ala Pro Ser Gly Val Gly Ser Asn Thr Met Ala Ser Gly Gly Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Lys Ser Gly Ser Val Asp Gly Ser Asn Asp Asn Thr
260 265 270

Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe
275 280 285

His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn
290 295 300

Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln
305 310 315 320

Val Lys Glu Val Thr Val Gln Asp Ser Thr Thr Thr Ile Ala Asn Asn
325 330 335

Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro
340 345 350

Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala
355 360 365

Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Arg Asp
370 375 380

Asn Thr Glu Asn Pro Thr Glu Arg Ser Ser Phe Tyr Cys Leu Glu Tyr
385 390 395 400

Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr
405 410 415

Thr Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser
420 425 430

Leu Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Phe Leu
435 440 445

Ser Arg Thr Asn Thr Gly Gly Val Gln Phe Ser Gln Ala Gly Pro Ser
450 455 460

Ser Met Ala Asn Gln Ala Arg Asn Trp Val Pro Gly Pro Cys Tyr Arg
465 470 475 480

Gln Gln Gly Trp Asn Leu Gly Ser Gly Val Asn Arg Ala Ser Val Ser
485 490 495

Ala Phe Ala Thr Ala Thr Lys Tyr His Leu Asn Gly Arg Asp Ser Leu
500 505 510

Met Asn Pro Gly Val Ala Met Ala Ser Asn Asn Leu Gln Gly Ser Asn
515 520 525

Thr Tyr Ala Leu Glu Asn Thr Leu Ile Phe Asn Ser Gln Pro Ala Asn
530 535 540

Pro Gly Thr Thr Ala Thr Tyr Leu Glu Gly Asn Met Ile Thr Asn Glu
545 550 555 560

Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu Glu Tyr Gly Ala
565 570 575

Val Ala Thr Asn Asn Gln Ser Ser Thr Thr Ala Pro Ala Thr Gly Leu
580 585 590

Val His Asn Gln Gly Val Leu Pro Gly Met Val Trp Gln Asn Arg Asp
595 600 605

Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly
610 615 620

Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro
625 630 635 640

Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro Ala Asp Pro Pro
645 650 655

Thr Thr Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile Thr Gln Tyr Ser
660 665 670

Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn
675 680 685

Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Asp
690 695 700

Pro Gln Phe Val Asp Phe Ala Val Asn Thr Glu Gly Val Tyr Ser Glu
705 710 715 720

Pro Arg Pro Ile Gly Thr Arg Phe Leu Thr Arg Asn Leu
725 730

<210> 146

<211> 737

<212> PRT

<213> Adeno-Associated Virus

<400> 146

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Pro Ser Pro Gln Arg Ser Pro Asp Ser Ser Thr Gly Ile
145 150 155 160

Gly Lys Lys Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln
165 170 175

Thr Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro
180 185 190

Pro Ala Ala Pro Ser Gly Val Gly Pro Asn Thr Met Ala Ala Gly Gly
195 200 205

Gly Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser
210 215 220

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

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

Ser Gln Gly Gly Pro Asn Thr Met Ala Asn Gln Ala Lys Asn Trp Leu
465 470 475 480

Pro Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Lys Thr Asp
485 490 495

Asn Asn Asn Ser Asn Phe Thr Trp Thr Gly Ala Thr Lys Tyr His Leu
500 505 510

Asn Gly Arg Asn Ser Leu Ala Asn Pro Gly Ile Ala Met Ala Ser His
515 520 525

Lys Asp Asp Lys Asp Lys Phe Phe Pro Met Ser Gly Ile Leu Ile Phe
530 535 540

Gly Lys Glu Ser Ala Gly Ala Ser Asn Thr Ala Leu Asp Asn Val Met
545 550 555 560

Leu Thr Ser Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu
565 570 575

Glu Tyr Gly Ile Val Ala Val Asn Leu Gln Ser Ser Ser Thr Asp Pro
580 585 590

Ala Thr Gly Thr Val Asn Ser Gln Gly Ala Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Thr Phe Asn Gln Ser Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser

690

695

700

Asn Tyr Ala Lys Ser Ala Asn Val Asp Phe Ala Val Asn Thr Glu Gly
 705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn
 725 730 735

Leu

<210> 147
 <211> 737
 <212> PRT
 <213> Adeno-Associated Virus

<400> 147

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
 1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
 20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
 35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
 50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
 65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
 85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
 100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
 115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
 130 135 140

Pro Val Glu Pro Ser Pro Gln Arg Ser Pro Asp Ser Ser Thr Gly Ile
145 150 155 160

Gly Lys Lys Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln
165 170 175

Thr Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro
180 185 190

Pro Ala Ala Pro Ser Gly Val Gly Pro Asn Thr Met Ala Ala Gly Gly
195 200 205

Gly Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser
210 215 220

Ser Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val
225 230 235 240

Ile Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His
245 250 255

Leu Tyr Lys Gln Ile Ser Ser Ala Ser Thr Gly Ala Ser Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Ser Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Thr Asn Asp Gly Val Thr Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Thr Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser
435 440 445

Arg Thr Gln Asn Gln Ser Gly Ser Ala Gln Asn Lys Asp Leu Gly Phe
450 455 460

Ser Arg Gly Ser Pro Ala Gly Met Ser Val Gln Ala Lys Asn Trp Leu
465 470 475 480

Pro Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Lys Thr Asp
485 490 495

Asn Asn Asn Ser Asn Phe Thr Trp Thr Gly Ala Thr Lys Tyr His Leu
500 505 510

Asn Gly Arg Asn Ser Leu Ala Asn Pro Gly Ile Ala Met Ala Ser His
515 520 525

Lys Asp Asp Lys Asp Lys Phe Phe Pro Met Ser Gly Ile Leu Ile Phe
530 535 540

Gly Lys Glu Ser Ala Gly Ala Ser Asn Thr Ala Leu Asp Asn Val Met
545 550 555 560

Leu Thr Ser Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu
565 570 575

Glu Tyr Gly Ile Val Ala Val Asn Leu Gln Ser Ser Ser Thr Asp Pro
580 585 590

Ala Thr Gly Thr Val Asn Ser Gln Gly Ala Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Thr Phe Asn Gln Ser Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Ala Lys Ser Ala Asn Val Asp Phe Ala Val Asn Thr Glu Gly
705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn
725 730 735

Leu

<210> 148

<211> 737

<212> PRT

<213> Adeno-Associated Virus

<400> 148

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Pro Ser Pro Gln Arg Ser Pro Asp Ser Ser Thr Gly Ile
145 150 155 160

Gly Lys Lys Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln
165 170 175

Thr Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro
180 185 190

Pro Ala Ala Pro Ser Gly Val Gly Pro Asn Thr Met Ala Ala Gly Gly
195 200 205

Gly Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser
210 215 220

Ser Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val
225 230 235 240

Ile Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His
245 250 255

Leu Tyr Lys Gln Ile Ser Ser Ala Ser Thr Gly Ala Ser Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn

290					295					300					
Asn 305	Trp	Gly	Phe	Arg	Pro 310	Lys	Arg	Leu	Ser	Phe 315	Lys	Leu	Phe	Asn	Ile 320
Gln	Val	Lys	Glu	Val 325	Thr	Thr	Asn	Asp	Gly 330	Val	Thr	Thr	Ile	Ala 335	Asn
Asn	Leu	Thr	Ser 340	Thr	Ile	Gln	Val	Phe 345	Thr	Asp	Ser	Glu	Tyr 350	Gln	Leu
Pro	Tyr	Val 355	Leu	Gly	Ser	Ala	His 360	Gln	Gly	Cys	Leu	Pro 365	Pro	Phe	Pro
Ala 370	Asp	Val	Phe	Met	Ile	Pro 375	Gln	Tyr	Gly	Tyr	Leu 380	Thr	Leu	Asn	Asn
Gly 385	Ser	Gln	Ala	Val	Gly 390	Arg	Ser	Ser	Phe	Tyr 395	Cys	Leu	Glu	Tyr	Phe 400
Pro	Ser	Gln	Met	Leu 405	Arg	Thr	Gly	Asn	Asn 410	Phe	Gln	Phe	Thr	Tyr 415	Thr
Phe	Glu	Asp	Val 420	Pro	Phe	His	Ser	Ser 425	Tyr	Ala	His	Ser	Gln 430	Ser	Leu
Asp	Arg	Leu 435	Met	Asn	Pro	Leu	Ile 440	Asp	Gln	Tyr	Leu 445	Tyr	Tyr	Leu	Asn
Arg 450	Thr	Gln	Asn	Gln	Ser	Gly 455	Ser	Ala	Gln	Asn 460	Lys	Asp	Leu	Leu	Phe
Ser 465	Arg	Gly	Ser	Pro	Ala 470	Gly	Met	Ser	Val	Gln 475	Pro	Lys	Asn	Trp	Leu 480
Pro	Gly	Pro	Cys	Tyr 485	Arg	Gln	Gln	Arg	Val 490	Ser	Lys	Thr	Lys	Thr 495	Asp
Asn	Asn	Asn	Ser 500	Asn	Phe	Thr	Trp	Thr 505	Gly	Ala	Ser	Lys	Tyr 510	Asn	Leu
Asn	Gly 515	Arg	Glu	Ser	Ile	Ile	Asn 520	Pro	Gly	Thr	Ala	Met 525	Ala	Ser	His

Lys Asp Asp Lys Asp Lys Phe Phe Pro Met Ser Gly Val Met Ile Phe
530 535 540

Gly Lys Glu Ser Ala Gly Ala Ser Asn Thr Ala Leu Asp Asn Val Met
545 550 555 560

Ile Thr Asp Glu Glu Glu Ile Lys Ala Thr Asn Pro Val Ala Thr Glu
565 570 575

Arg Phe Gly Thr Val Ala Val Asn Leu Gln Ser Ser Ser Thr Asp Pro
580 585 590

Ala Thr Gly Asp Val His Val Met Gly Ala Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Thr Phe Asn Gln Ser Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Ala Lys Ser Ala Asn Val Asp Phe Ala Val Asn Thr Glu Gly
705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn
725 730 735

Leu

<210> 149

<211> 737
<212> PRT
<213> Adeno-Associated Virus

<400> 149

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Pro Ser Pro Gln Arg Ser Pro Asp Ser Ser Thr Gly Ile
145 150 155 160

Gly Lys Lys Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln
165 170 175

Thr Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro
180 185 190

Pro Ala Ala Pro Ser Gly Val Gly Pro Asn Thr Met Ala Ala Gly Gly
195 200 205

Gly Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser
210 215 220

Ser Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val
225 230 235 240

Ile Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His
245 250 255

Leu Tyr Lys Gln Ile Ser Ser Glu Thr Ala Gly Ser Thr Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Ser Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Thr Asn Asp Gly Val Thr Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Thr Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser
435 440 445

Arg Thr Gln Ser Asn Pro Gly Gly Thr Ala Gly Asn Arg Glu Leu Gly
450 455 460

Phe Ser Gln Gly Gly Pro Ser Thr Met Ala Glu Gln Ala Lys Asn Trp
465 470 475 480

Leu Pro Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Leu Asp
485 490 495

Gln Asn Asn Asn Ser Asn Phe Ala Trp Thr Gly Ala Thr Lys Tyr His
500 505 510

Leu Asn Gly Arg Asn Ser Leu Ala Asn Pro Gly Ile Ala Met Ala Thr
515 520 525

His Lys Asp Asp Glu Asp Arg Phe Phe Pro Ser Ser Gly Ile Leu Ile
530 535 540

Phe Gly Lys Thr Gly Ala Thr Asn Lys Thr Thr Leu Glu Asn Val Met
545 550 555 560

Leu Thr Ser Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu
565 570 575

Glu Tyr Gly Ile Val Ser Ser Asn Leu Gln Ala Ala Asn Thr Ala Ala
580 585 590

Gln Thr Gly Thr Val Asn Ser Gln Gly Ala Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Thr Phe Asn Gln Ser Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Phe Glu Lys Gln Thr Gly Val Asp Phe Ala Val Asn Thr Glu Gly
705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn
725 730 735

Leu

<210> 150
<211> 737
<212> PRT
<213> Adeno-Associated Virus

<400> 150

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Lys Pro
20 25 30

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Gln Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Pro Ser Pro Gln Arg Ser Pro Asp Ser Ser Thr Gly Ile
145 150 155 160

Gly Lys Lys Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln
165 170 175

Thr Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro
180 185 190

Pro Ala Ala Pro Ser Gly Val Gly Pro Asn Thr Met Ala Ala Gly Gly
195 200 205

Gly Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser
210 215 220

Ser Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val
225 230 235 240

Ile Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His
245 250 255

Leu Tyr Lys Gln Ile Ser Ser Glu Thr Ala Gly Ser Thr Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Ser Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Thr Asn Asp Gly Val Thr Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Ile Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro

355							360						365			
Ala	Asp	Val	Phe	Met	Ile	Pro	Gln	Tyr	Gly	Tyr	Leu	Thr	Leu	Asn	Asn	
370						375					380					
Gly	Ser	Gln	Ala	Val	Gly	Arg	Ser	Ser	Phe	Tyr	Cys	Leu	Glu	Tyr	Phe	
385					390					395					400	
Pro	Ser	Gln	Met	Leu	Arg	Thr	Gly	Asn	Asn	Phe	Gln	Phe	Thr	Tyr	Thr	
				405					410					415		
Phe	Glu	Asp	Val	Pro	Phe	His	Ser	Ser	Tyr	Ala	His	Ser	Gln	Ser	Leu	
			420					425					430			
Asp	Arg	Leu	Met	Asn	Pro	Leu	Ile	Asp	Gln	Tyr	Leu	Tyr	Tyr	Leu	Ala	
		435					440					445				
Arg	Thr	Gln	Ser	Asn	Pro	Gly	Gly	Thr	Ala	Gly	Asn	Arg	Glu	Leu	Gln	
450						455					460					
Phe	Tyr	Gln	Gly	Gly	Pro	Ser	Thr	Met	Ala	Glu	Gln	Ala	Lys	Asn	Trp	
465					470					475					480	
Leu	Pro	Gly	Pro	Cys	Phe	Arg	Gln	Gln	Arg	Val	Ser	Lys	Thr	Leu	Asp	
				485					490					495		
Gln	Asn	Asn	Asn	Ser	Asn	Phe	Ala	Trp	Thr	Gly	Ala	Thr	Lys	Tyr	His	
			500					505					510			
Leu	Asn	Gly	Arg	Asn	Ser	Leu	Val	Asn	Pro	Gly	Val	Ala	Met	Ala	Thr	
		515					520					525				
His	Lys	Asp	Asp	Glu	Asp	Arg	Phe	Phe	Pro	Ser	Ser	Gly	Val	Leu	Ile	
530						535					540					
Phe	Gly	Lys	Thr	Gly	Ala	Thr	Asn	Lys	Thr	Thr	Leu	Glu	Asn	Val	Leu	
545					550					555					560	
Met	Thr	Asn	Glu	Glu	Glu	Ile	Arg	Pro	Thr	Asn	Pro	Val	Ala	Thr	Glu	
			565						570					575		
Glu	Tyr	Gly	Ile	Val	Ser	Ser	Asn	Leu	Gln	Ala	Ala	Asn	Thr	Ala	Ala	
			580					585					590			

Gln Thr Gln Val Val Asn Asn Gln Gly Ala Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Thr Phe Asn Gln Ser Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Phe Glu Lys Gln Thr Gly Val Asp Phe Ala Val Asn Thr Glu Gly
705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn
725 730 735

Leu

<210> 151
<211> 737
<212> PRT
<213> Adeno-Associated Virus

<400> 151

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Thr Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

Ala Ala Pro Ser Gly Val Gly Ser Asn Thr Met Ala Ser Gly Gly Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ala Thr Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Gln Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Phe Leu Ser
435 440 445

Arg Thr Gln Thr Thr Gly Gly Thr Ala Asn Thr Gln Thr Leu Gln Phe
450 455 460

Ser Gln Ala Gly Pro Ser Ser Met Ala Asn Gln Ala Arg Asn Trp Val
465 470 475 480

Pro Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Thr Gly Gln
485 490 495

Asn Asn Asn Ser Asn Phe Ala Trp Thr Ala Ala Thr Lys Tyr His Leu
500 505 510

Asn Gly Arg Asp Ser Leu Met Asn Pro Gly Val Ala Met Ala Ser His
515 520 525

Lys Asp Asp Glu Glu Arg Phe Phe Pro Ser Asn Gly Val Leu Ile Phe
530 535 540

Gly Lys Gln Asn Ala Ala Arg Asp Asn Ala Asp Tyr Ser Asp Val Met
545 550 555 560

Ile Thr Asn Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu
565 570 575

Glu Tyr Gly Ala Val Ala Asp Asn Leu Gln Gln Gln Asn Thr Ala Pro
580 585 590

Gln Ile Gly Leu Val His Asn Gln Gly Val Leu Pro Gly Met Val Trp
595 600 605

Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Thr Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Tyr Lys Ser Thr Ser Val Asp Phe Ala Val Asn Thr Glu Gly
705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Phe Leu Thr Arg Asn
725 730 735

Leu

<210> 152
<211> 737
<212> PRT
<213> Adeno-Associated Virus

<400> 152

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asp Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ser Gly Ile Gly
145 150 155 160

Lys Thr Gly Gln Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro Pro
180 185 190

Ala Ala Pro Ser Gly Val Gly Ser Asn Thr Met Ala Ser Gly Gly Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ala Thr Asn Asp Asn
260 265 270

Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Gln Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr Thr
405 410 415

Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu

420	425	430
Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Phe Leu Ser		
435	440	445
Arg Thr Gln Thr Thr Gly Gly Thr Ala Asn Thr Gln Thr Leu Gln Phe		
450	455	460
Ser Gln Gly Gly Pro Asn Thr Met Ala Asn Gln Ala Arg Asn Trp Val		
465	470	475
Pro Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Thr Gly Gln		
	485	490
Asn Asn Asn Ser Asn Phe Ala Trp Thr Ala Ala Thr Lys Tyr His Leu		
	500	505
Asn Gly Arg Asp Ser Leu Met Asn Pro Gly Val Ala Met Ala Ser His		
	515	520
Lys Asp Asp Glu Glu Arg Phe Phe Pro Ser Asn Gly Val Leu Ile Phe		
	530	535
Gly Lys Gln Asn Ala Ala Arg Asp Asn Ala Asp Tyr Ser Asp Val Met		
545	550	555
Ile Thr Asn Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu		
	565	570
Glu Tyr Gly Ala Val Ala Asp Asn Leu Gln Gln Gln Asn Thr Ala Pro		
	580	585
Gln Ile Gly Leu Val His Asn Gln Gly Val Leu Pro Gly Met Val Trp		
	595	600
Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro		
	610	615
His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly		
625	630	635
Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro		
	645	650
		655

Ala Asp Pro Pro Thr Thr Phe Asn Gln Ala Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Tyr Lys Ser Thr Ser Val Asp Phe Ala Val Asn Thr Glu Gly
705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Phe Leu Thr Arg Asn
725 730 735

Leu

<210> 153
<211> 738
<212> PRT
<213> Adeno-Associated Virus

<400> 153

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asn Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Ala Lys Lys Arg
130 135 140

Pro Val Glu Pro Ser Pro Gln Arg Ser Pro Asp Ser Ser Thr Gly Ile
145 150 155 160

Gly Lys Lys Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln
165 170 175

Thr Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro
180 185 190

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

Gly Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn
210 215 220

Ala Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val
225 230 235 240

Ile Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His
245 250 255

Leu Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp
260 265 270

Asn Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn
275 280 285

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Lys Leu Arg Phe Lys Leu Phe Asn
305 310 315 320

Ile Gln Val Lys Glu Val Thr Gln Asn Glu Gly Thr Lys Thr Ile Ala
325 330 335

Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Ser Asp Ser Glu Tyr Gln
340 345 350

Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe
355 360 365

Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn
370 375 380

Asn Gly Ser Gln Ser Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr
385 390 395 400

Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Glu Phe Ser Tyr
405 410 415

Ser Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser
420 425 430

Leu Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu
435 440 445

Ala Arg Thr Gln Ser Thr Gly Gly Thr Ala Gly Thr Gln Gln Leu Gln
450 455 460

Phe Tyr Gln Gly Gly Pro Ser Thr Met Ala Glu Gln Ala Lys Asn Trp
465 470 475 480

Leu Pro Gly Pro Cys Phe Arg Gln Gln Arg Val Ser Thr Thr Leu Ser
485 490 495

Gln Asn Asn Asn Ser Asn Phe Ala Trp Thr Gly Ala Thr Lys Tyr His
500 505 510

Leu Asn Gly Arg Asn Ser Leu Val Asn Pro Gly Val Ala Met Ala Thr
515 520 525

His Lys Asp Asp Glu Glu Arg Phe Phe Pro Ser Ser Gly Val Leu Ile
530 535 540

Phe Gly Lys Gln Gly Ala Gly Lys Asp Asn Val Asp Tyr Ser Ser Val
545 550 555 560

Leu Met Thr Asn Glu Glu Glu Ile Arg Pro Thr Asn Pro Val Ala Thr
565 570 575

Glu Glu Tyr Gly Ile Val Ala Asp Asn Leu Gln Gln Gln Asn Ala Ala
580 585 590

Pro Ile Val Gln Val Val Asn Asn Gln Gly Ala Leu Pro Gly Met Val
595 600 605

Trp Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile
610 615 620

Pro His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe
625 630 635 640

Gly Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val
645 650 655

Pro Ala Asn Pro Pro Glu Val Phe Thr Pro Ala Lys Phe Ala Ser Phe
660 665 670

Ile Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu
675 680 685

Leu Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr
690 695 700

Ser Asn Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asp Ser Gln
705 710 715 720

Gly Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg
725 730 735

Asn Leu

<210> 154

<211> 738

<212> PRT

<213> Adeno-Associated Virus

<400> 154

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Asp Leu Lys Pro Gly Ala Pro Lys Pro

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

Leu Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp
260 265 270

Asn Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn
275 280 285

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Lys Leu Arg Phe Lys Leu Phe Asn
305 310 315 320

Ile Gln Val Lys Glu Val Thr Gln Asn Glu Gly Thr Lys Thr Ile Ala
325 330 335

Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Ser Asp Ser Glu Tyr Gln
340 345 350

Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe
355 360 365

Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn
370 375 380

Asn Gly Ser Gln Ser Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr
385 390 395 400

Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Glu Phe Ser Tyr
405 410 415

Ser Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser
420 425 430

Leu Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu
435 440 445

Ala Arg Thr Gln Ser Thr Gly Gly Thr Ala Gly Thr Gln Gln Leu Gln
450 455 460

Phe Tyr Gln Ala Gly Pro Asn Asn Met Ser Ala Gln Ala Lys Asn Trp
465 470 475 480

Leu Pro Gly Pro Cys Phe Arg Gln Gln Arg Val Ser Thr Thr Leu Ser

485

490

495

Gln Asn Asn Asn Ser Asn Phe Ala Trp Thr Gly Ala Thr Lys Tyr His
500 505 510

Leu Asn Gly Arg Asn Ser Leu Val Asn Pro Gly Val Ala Met Ala Thr
515 520 525

His Lys Asp Asp Glu Glu Arg Phe Phe Pro Ser Ser Gly Val Leu Ile
530 535 540

Phe Gly Lys Gln Gly Ala Gly Lys Asp Asn Val Asp Tyr Ser Ser Val
545 550 555 560

Leu Met Thr Asn Glu Glu Glu Ile Arg Pro Thr Asn Pro Val Ala Thr
565 570 575

Glu Glu Tyr Gly Ile Val Ala Asp Asn Leu Gln Gln Gln Asn Ala Ala
580 585 590

Pro Ile Val Gln Val Val Asn Asn Gln Gly Ala Leu Pro Gly Met Val
595 600 605

Trp Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile
610 615 620

Pro His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe
625 630 635 640

Gly Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val
645 650 655

Pro Ala Asn Pro Pro Glu Val Phe Thr Pro Ala Lys Phe Ala Ser Phe
660 665 670

Ile Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu
675 680 685

Leu Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr
690 695 700

Ser Asn Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asp Ser Gln
705 710 715 720

Gly Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg
725 730 735

Asn Leu

<210> 155
<211> 738
<212> PRT
<213> Adeno-Associated Virus

<400> 155

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

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

Lys Ala Asn Gln Gln Lys Gln Asp Asn Gly Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Arg Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Gln Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Gly Ala Lys Thr Ala Pro Ala Lys Lys Arg
130 135 140

Pro Val Glu Pro Ser Pro Gln Arg Ser Pro Asp Ser Ser Thr Gly Ile
145 150 155 160

Gly Lys Lys Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln
165 170 175

Thr Gly Asp Ser Glu Ser Val Pro Asp Pro Gln Pro Leu Gly Glu Pro
180 185 190

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

Gly Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn
210 215 220

Ala Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val
225 230 235 240

Ile Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His
245 250 255

Leu Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp
260 265 270

Asn Thr Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn
275 280 285

Arg Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn
290 295 300

Asn Asn Trp Gly Phe Arg Pro Lys Lys Leu Arg Phe Lys Leu Phe Asn
305 310 315 320

Ile Gln Val Lys Glu Val Thr Gln Asn Glu Gly Thr Lys Thr Ile Ala
325 330 335

Asn Asn Leu Thr Ser Thr Ile Gln Val Phe Ser Asp Ser Glu Tyr Gln
340 345 350

Leu Pro Tyr Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe
355 360 365

Pro Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn
370 375 380

Asn Gly Ser Gln Ser Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr
385 390 395 400

Phe Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Glu Phe Ser Tyr
405 410 415

Ser Phe Glu Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser
420 425 430

Leu Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu
435 440 445

Ser Arg Thr Gln Ser Thr Gly Gly Thr Ala Gly Thr Gln Gln Leu Leu
450 455 460

Phe Ser Gln Ala Gly Pro Asn Asn Met Ser Ala Gln Ala Lys Asn Trp
465 470 475 480

Leu Pro Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Leu Ser
485 490 495

Gln Asn Asn Asn Ser Asn Phe Ala Trp Thr Gly Ala Thr Lys Tyr His
500 505 510

Leu Asn Gly Arg Asp Ser Leu Val Asn Pro Gly Val Ala Met Ala Thr
515 520 525

His Lys Asp Asp Glu Glu Arg Phe Phe Pro Ser Ser Gly Val Leu Met
530 535 540

Phe Gly Lys Gln Gly Ala Gly Lys Asp Asn Val Asp Tyr Ser Ser Val
545 550 555 560

Met Leu Thr Ser Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr
565 570 575

Glu Gln Tyr Gly Val Val Ala Asp Asn Leu Gln Gln Gln Asn Ala Ala
580 585 590

Pro Ile Val Gly Ala Val Asn Ser Gln Gly Ala Leu Pro Gly Met Val
595 600 605

Trp Gln Asn Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile
610 615 620

Pro His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe
625 630 635 640

Gly Leu Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val
645 650 655

Pro Ala Asn Pro Pro Glu Val Phe Thr Pro Ala Lys Phe Ala Ser Phe
660 665 670

Ile Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu
675 680 685

Leu Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr
690 695 700

Ser Asn Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asp Ser Gln
705 710 715 720

Gly Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg
725 730 735

Asn Leu

<210> 156
<211> 737
<212> PRT
<213> Adeno-Associated Virus

<400> 156

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Asn Leu Ser
1 5 10 15

Glu Gly Ile Arg Glu Trp Trp Ala Leu Lys Pro Gly Ala Pro Gln Pro
20 25 30

Lys Ala Asn Gln Gln His Gln Asp Asn Ala Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Gly Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Gln Gln Leu Lys Ala Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala

85

90

95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
 100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Leu Leu Glu Pro
 115 120 125

Leu Gly Leu Val Glu Glu Ala Ala Lys Thr Ala Pro Gly Lys Lys Arg
 130 135 140

Pro Val Glu Gln Ser Pro Gln Glu Pro Asp Ser Ser Ala Gly Ile Gly
 145 150 155 160

Lys Ser Gly Ala Gln Pro Ala Lys Lys Arg Leu Asn Phe Gly Gln Thr
 165 170 175

Gly Asp Thr Glu Ser Val Pro Asp Pro Gln Pro Ile Gly Glu Pro Pro
 180 185 190

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

Ala Pro Val Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Ser Ser
 210 215 220

Ser Gly Asn Trp His Cys Asp Ser Gln Trp Leu Gly Asp Arg Val Ile
 225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
 245 250 255

Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp Asn
 260 265 270

Ala Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
 275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
 290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
 305 310 315 320

Gln Val Lys Glu Val Thr Gln Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Asp Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Glu Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr Glu
405 410 415

Phe Glu Asn Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser
435 440 445

Lys Thr Ile Ser Thr Gly Gly Thr Ala Gly Thr Gln Gln Leu Lys Phe
450 455 460

Ser Val Ala Gly Pro Ser Asn Met Ala Val Gln Gly Arg Asn Tyr Ile
465 470 475 480

Pro Gly Pro Ser Tyr Arg Gln Gln Arg Val Ser Thr Thr Leu Ser Gln
485 490 495

Asn Asn Asn Ser Asn Phe Ala Trp Thr Gly Ala Ser Ser Trp Ala Leu
500 505 510

Asn Gly Arg Asn Ser Leu Met Asn Pro Gly Pro Ala Met Ala Thr His
515 520 525

Lys Asp Asp Glu Glu Arg Phe Phe Pro Ser Ser Gly Ser Leu Ile Phe
530 535 540

Gly Lys Gln Gly Ala Gly Lys Asp Asn Val Asp Tyr Ser Ser Val Met

545		550		555		560
Ile Thr Asn Glu	Glu Glu Ile Lys Thr Thr	Asn Pro Val Ala Thr	Glu			
	565		570			575
Ser Tyr Gly Gln	Val Ala Asp Asn Leu Gln Gln Gln	Asn Ala Ala Pro				
	580		585			590
Ile Val Gly Trp	Val Gln Asn Gln Gly Ile Leu Pro	Gly Met Val Trp				
	595		600			605
Gln Asp Arg Asp	Val Tyr Leu Gln Gly Pro Ile Trp	Ala Lys Ile Pro				
	610		615			620
His Thr Asp Gly	Asn Phe His Pro Ser Pro	Leu Met Gly Gly Phe	Gly			
	625		630			635
Met Lys His Pro	Pro Pro Gln Ile Leu Ile Lys	Asn Thr Pro Val Pro				
		645			650	
Ala Asp Pro Pro	Thr Ala Phe Asn Lys Asp Lys	Leu Asn Ser Phe Ile				
		660			665	
Thr Gln Tyr Ser	Thr Gly Gln Val Ser Val Glu Ile	Glu Trp Glu Leu				
		675			680	
Gln Lys Glu Asn	Ser Lys Arg Trp Asn Pro Glu Ile	Gln Tyr Thr Ser				
		690			695	
Asn Tyr Tyr Lys	Ser Thr Asn Val Asp Phe Ala Val	Asn Thr Glu Gly				
		705			710	
Val Tyr Ser Glu	Pro Arg Pro Ile Gly Thr Arg Tyr	Leu Thr Arg Asn				
		715			720	
		725			730	
					735	

Leu

<210> 157
 <211> 737
 <212> PRT
 <213> Adeno-Associated Virus
 <400> 157

Met	Ala	Ala	Asp	Gly	Tyr	Leu	Pro	Asp	Trp	Leu	Glu	Asp	Asn	Leu	Ser	1	5	10	15
Glu	Gly	Ile	Arg	Glu	Trp	Trp	Ala	Leu	Lys	Pro	Gly	Ala	Pro	Gln	Pro	20	25	30	
Lys	Ala	Asn	Gln	Gln	His	Gln	Asp	Asn	Ala	Arg	Gly	Leu	Val	Leu	Pro	35	40	45	
Gly	Tyr	Lys	Tyr	Leu	Gly	Pro	Gly	Asn	Gly	Leu	Asp	Lys	Gly	Glu	Pro	50	55	60	
Val	Asn	Ala	Ala	Asp	Ala	Ala	Ala	Leu	Glu	His	Asp	Lys	Ala	Tyr	Asp	65	70	75	80
Gln	Gln	Leu	Lys	Ala	Gly	Asp	Asn	Pro	Tyr	Leu	Lys	Tyr	Asn	His	Ala	85	90	95	
Asp	Ala	Glu	Phe	Gln	Glu	Arg	Leu	Lys	Glu	Asp	Thr	Ser	Phe	Gly	Gly	100	105	110	
Asn	Leu	Gly	Arg	Ala	Val	Phe	Gln	Ala	Lys	Lys	Arg	Leu	Leu	Glu	Pro	115	120	125	
Leu	Gly	Leu	Val	Glu	Glu	Ala	Ala	Lys	Thr	Ala	Pro	Gly	Lys	Lys	Arg	130	135	140	
Pro	Val	Glu	Gln	Ser	Pro	Gln	Glu	Pro	Asp	Ser	Ser	Ala	Gly	Ile	Gly	145	150	155	160
Lys	Ser	Gly	Ala	Gln	Pro	Ala	Lys	Lys	Arg	Leu	Asn	Phe	Gly	Gln	Thr	165	170	175	
Gly	Asp	Thr	Glu	Ser	Val	Pro	Asp	Pro	Gln	Pro	Ile	Gly	Glu	Pro	Pro	180	185	190	
Ala	Ala	Pro	Ser	Gly	Val	Gly	Ser	Leu	Thr	Met	Ala	Ser	Gly	Gly	Gly	195	200	205	
Ala	Pro	Val	Ala	Asp	Asn	Asn	Glu	Gly	Ala	Asp	Gly	Val	Gly	Ser	Ser	210	215	220	
Ser	Gly	Asn	Trp	His	Cys	Asp	Ser	Gln	Trp	Leu	Gly	Asp	Arg	Val	Ile	225	230	235	240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Asn Gly Thr Ser Gly Gly Ser Thr Asn Asp Asn
260 265 270

Ala Tyr Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg
275 280 285

Phe His Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn
290 295 300

Asn Trp Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile
305 310 315 320

Gln Val Lys Glu Val Thr Gln Asn Glu Gly Thr Lys Thr Ile Ala Asn
325 330 335

Asn Leu Thr Ser Thr Val Gln Val Phe Thr Asp Ser Asp Tyr Gln Leu
340 345 350

Pro Tyr Val Leu Gly Ser Ala His Glu Gly Cys Leu Pro Pro Phe Pro
355 360 365

Ala Asp Val Phe Met Ile Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn
370 375 380

Gly Ser Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe
385 390 395 400

Pro Ser Gln Met Leu Arg Thr Gly Asn Asn Phe Gln Phe Ser Tyr Glu
405 410 415

Phe Glu Asn Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu
420 425 430

Asp Arg Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser
435 440 445

Arg Thr Gln Ser Thr Gly Gly Thr Ala Gly Thr Gln Gln Leu Leu Phe
450 455 460

Ser Gln Ala Gly Pro Asn Asn Met Ser Ala Gln Ala Lys Asn Trp Leu
465 470 475 480

Pro Gly Pro Cys Tyr Arg Gln Gln Arg Val Ser Thr Thr Leu Ser Gln
485 490 495

Asn Asn Asn Ser Asn Phe Ala Trp Thr Gly Ala Thr Lys Tyr His Leu
500 505 510

Asn Gly Arg Asp Ser Leu Val Asn Pro Gly Val Ala Met Ala Thr His
515 520 525

Lys Asp Asp Glu Glu Arg Phe Phe Pro Ser Ser Gly Val Leu Met Phe
530 535 540

Gly Lys Gln Gly Ala Gly Lys Asp Asn Val Asp Tyr Ser Ser Val Met
545 550 555 560

Leu Thr Ser Glu Glu Glu Ile Lys Thr Thr Asn Pro Val Ala Thr Glu
565 570 575

Gln Tyr Gly Val Val Ala Asp Asn Leu Gln Gln Gln Asn Ala Ala Pro
580 585 590

Ile Val Gly Ala Val Asn Ser Gln Gly Ala Leu Pro Gly Met Val Trp
595 600 605

Gln Asp Arg Asp Val Tyr Leu Gln Gly Pro Ile Trp Ala Lys Ile Pro
610 615 620

His Thr Asp Gly Asn Phe His Pro Ser Pro Leu Met Gly Gly Phe Gly
625 630 635 640

Met Lys His Pro Pro Pro Gln Ile Leu Ile Lys Asn Thr Pro Val Pro
645 650 655

Ala Asp Pro Pro Thr Ala Phe Asn Lys Asp Lys Leu Asn Ser Phe Ile
660 665 670

Thr Gln Tyr Ser Thr Gly Gln Val Ser Val Glu Ile Glu Trp Glu Leu
675 680 685

Gln Lys Glu Asn Ser Lys Arg Trp Asn Pro Glu Ile Gln Tyr Thr Ser
690 695 700

Asn Tyr Tyr Lys Ser Thr Asn Val Asp Phe Ala Val Asn Thr Glu Gly
705 710 715 720

Val Tyr Ser Glu Pro Arg Pro Ile Gly Thr Arg Tyr Leu Thr Arg Asn
725 730 735

Leu

<210> 158
<211> 44
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic primer

<400> 158
gtgccctttt acggctgcgt gaactggacc aatgaaaact ttcc
44

<210> 159
<211> 44
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic primer

<400> 159
ccgacggagt gggcaatgcc tcaggaaatt ggcattgcga ttcc
44

<210> 160
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<400> 160

Thr Leu Ala Val Pro Phe Lys
1 5