

SEQUENCE LISTING

<110> Deutsches Krebsforschungszentrum

<120> Means and methods for diagnosing pancreatic cancer

<130> DK10010PC

<160> 27

<170> PatentIn version 3.3

<210> 1

<211> 292

<212> PRT

<213> Homo sapiens

<400> 1

Met Asn Pro Phe Trp Ser Met Ser Thr Ser Ser Val Arg Lys Arg Ser
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Glu Gly Glu Glu Lys Thr Leu Thr Gly Asp Val Lys Thr Ser Pro Pro
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Arg Thr Ala Pro Lys Lys Gln Leu Pro Ser Ile Pro Lys Asn Ala Leu
35 40 45

Pro Ile Thr Lys Pro Thr Ser Pro Ala Pro Ala Ala Gln Ser Thr Asn
50 55 60

Gly Thr His Ala Ser Tyr Gly Pro Phe Tyr Leu Glu Tyr Ser Leu Leu
65 70 75 80

Ala Glu Phe Thr Leu Val Val Lys Gln Lys Leu Pro Gly Val Tyr Val
85 90 95

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

Arg His Gly Leu Tyr Gln Asp Gly Val Phe Lys Phe Thr Val Tyr Ile
115 120 125

Pro Asp Asn Tyr Pro Asp Gly Asp Cys Pro Arg Leu Val Phe Asp Ile
130 135 140

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

Lys Arg Ala Phe Ala Lys Trp Arg Arg Asn His Asn His Ile Trp Gln
165 170 175

Val Leu Met Tyr Ala Arg Arg Val Phe Tyr Lys Ile Asp Thr Ala Ser
180 185 190

Pro Leu Asn Pro Glu Ala Ala Val Leu Tyr Glu Lys Asp Ile Gln Leu
195 200 205

Phe Lys Ser Lys Val Val Asp Ser Val Lys Val Cys Thr Ala Arg Leu
210 215 220

Phe Asp Gln Pro Lys Ile Glu Asp Pro Tyr Ala Ile Ser Phe Ser Pro
225 230 235 240

Trp Asn Pro Ser Val His Asp Glu Ala Arg Glu Lys Met Leu Thr Gln
245 250 255

Lys Lys Pro Glu Glu Gln His Asn Lys Ser Val His Val Ala Gly Leu
260 265 270

Ser Trp Val Lys Pro Gly Ser Val Gln Pro Phe Ser Lys Glu Glu Lys
275 280 285

Thr Val Ala Thr
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<210> 2
<211> 521
<212> PRT
<213> Homo sapiens

<400> 2

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Lys Val Ser Phe Arg Glu Lys Leu Leu Ile Ile Asp Ser Asn Leu Gly
20 25 30

Val Gln Asp Val Glu Asn Leu Lys Phe Leu Cys Ile Gly Leu Val Pro
35 40 45

Asn Lys Lys Leu Glu Lys Ser Ser Ser Ala Ser Asp Val Phe Glu His
50 55 60

Leu Leu Ala Glu Asp Leu Leu Ser Glu Glu Asp Pro Phe Phe Leu Ala
65 70 75 80

Glu Leu Leu Tyr Ile Ile Arg Gln Lys Lys Leu Leu Gln His Leu Asn
85 90 95

Cys Thr Lys Glu Glu Val Glu Arg Leu Leu Pro Thr Arg Gln Arg Val
100 105 110

Ser Leu Phe Arg Asn Leu Leu Tyr Glu Leu Ser Glu Gly Ile Asp Ser
 115 120 125

Glu Asn Leu Lys Asp Met Ile Phe Leu Leu Lys Asp Ser Leu Pro Lys
 130 135 140

Thr Glu Met Thr Ser Leu Ser Phe Leu Ala Phe Leu Glu Lys Gln Gly
 145 150 155 160

Lys Ile Asp Glu Asp Asn Leu Thr Cys Leu Glu Asp Leu Cys Lys Thr
 165 170 175

Val Val Pro Lys Leu Leu Arg Asn Ile Glu Lys Tyr Lys Arg Glu Lys
 180 185 190

Ala Ile Gln Ile Val Thr Pro Pro Val Asp Lys Glu Ala Glu Ser Tyr
 195 200 205

Gln Gly Glu Glu Glu Leu Val Ser Gln Thr Asp Val Lys Thr Phe Leu
 210 215 220

Glu Ala Leu Pro Gln Glu Ser Trp Gln Asn Lys His Ala Gly Ser Asn
 225 230 235 240

Gly Asn Arg Ala Thr Asn Gly Ala Pro Ser Leu Val Ser Arg Gly Met
 245 250 255

Gln Gly Ala Ser Ala Asn Thr Leu Asn Ser Glu Thr Ser Thr Lys Arg
 260 265 270

Ala Ala Val Tyr Arg Met Asn Arg Asn His Arg Gly Leu Cys Val Ile
 275 280 285

Val Asn Asn His Ser Phe Thr Ser Leu Lys Asp Arg Gln Gly Thr His
 290 295 300

Lys Asp Ala Glu Ile Leu Ser His Val Phe Gln Trp Leu Gly Phe Thr
 305 310 315 320

Val His Ile His Asn Asn Val Thr Lys Val Glu Met Glu Met Val Leu
 325 330 335

Gln Lys Gln Lys Cys Asn Pro Ala His Ala Asp Gly Asp Cys Phe Val
 340 345 350

Phe Cys Ile Leu Thr His Gly Arg Phe Gly Ala Val Tyr Ser Ser Asp
 355 360 365

Glu Ala Leu Ile Pro Ile Arg Glu Ile Met Ser His Phe Thr Ala Leu
370 375 380

Gln Cys Pro Arg Leu Ala Glu Lys Pro Lys Leu Phe Phe Ile Gln Ala
385 390 395 400

Cys Gln Gly Glu Glu Ile Gln Pro Ser Val Ser Ile Glu Ala Asp Ala
405 410 415

Leu Asn Pro Glu Gln Ala Pro Thr Ser Leu Gln Asp Ser Ile Pro Ala
420 425 430

Glu Ala Asp Phe Leu Leu Gly Leu Ala Thr Val Pro Gly Tyr Val Ser
435 440 445

Phe Arg His Val Glu Glu Gly Ser Trp Tyr Ile Gln Ser Leu Cys Asn
450 455 460

His Leu Lys Lys Leu Val Pro Arg Met Leu Lys Phe Leu Glu Lys Thr
465 470 475 480

Met Glu Ile Arg Gly Arg Lys Arg Thr Val Trp Gly Ala Lys Gln Ile
485 490 495

Ser Ala Thr Ser Leu Pro Thr Ala Ile Ser Ala Gln Thr Pro Arg Pro
500 505 510

Pro Met Arg Arg Trp Ser Ser Val Ser
515 520

<210> 3
<211> 138
<212> PRT
<213> Homo sapiens

<400> 3

Met Arg Glu Glu Asn Lys Gly Met Pro Ser Gly Gly Gly Ser Asp Glu
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Gly Leu Ala Ser Ala Ala Ala Arg Gly Leu Val Glu Lys Val Arg Gln
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Leu Leu Glu Ala Gly Ala Asp Pro Asn Gly Val Asn Arg Phe Gly Arg
35 40 45

Arg Ala Ile Gln Val Met Met Met Gly Ser Ala Arg Val Ala Glu Leu
50 55 60

Leu Leu Leu His Gly Ala Glu Pro Asn Cys Ala Asp Pro Ala Thr Leu

Phe Gly Pro Ala Ile Phe Ile Gly Trp Ala Gly Ser Ala Leu Val Ile
165 170 175

Leu Gly Gly Ala Leu Leu Ser Cys Ser Cys Pro Gly Asn Glu Ser Lys
180 185 190

Ala Gly Tyr Arg Ala Pro Arg Ser Tyr Pro Lys Ser Asn Ser Ser Lys
195 200 205

Glu Tyr Val
210

<210> 5
<211> 106
<212> PRT
<213> Homo sapiens

<400> 5

Met Ala Leu Asp Pro Ala Asp Gln His Leu Arg His Val Glu Lys Asp
1 5 10 15

Val Leu Ile Pro Lys Ile Met Arg Glu Lys Ala Lys Glu Arg Cys Ser
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Glu Gln Val Gln Asp Phe Thr Lys Cys Cys Lys Asn Ser Gly Val Leu
35 40 45

Met Val Val Lys Cys Arg Lys Glu Asn Ser Ala Leu Lys Glu Cys Leu
50 55 60

Thr Ala Tyr Tyr Asn Asp Pro Ala Phe Tyr Glu Glu Cys Lys Met Glu
65 70 75 80

Tyr Leu Lys Glu Arg Glu Glu Phe Arg Lys Thr Gly Ile Pro Thr Lys
85 90 95

Lys Arg Leu Gln Lys Leu Pro Thr Ser Met
100 105

<210> 6
<211> 461
<212> PRT
<213> Homo sapiens

<400> 6

Met Asn Asn Phe Gly Asn Glu Glu Phe Asp Cys His Phe Leu Asp Glu
1 5 10 15

Gly Phe Thr Ala Lys Asp Ile Leu Asp Gln Lys Ile Asn Glu Val Ser
20 25 30

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

Asn Ile Ile Ala Lys Lys Ile Val Leu Lys Glu Gln Thr Gly Ser Asp
290 295 300

Asp Glu Asp Glu Ser Ser Glu Gln Thr Phe Met Tyr Tyr Val Asn Asp
305 310 315 320

Gly Val Tyr Gly Ser Phe Asn Cys Ile Leu Tyr Asp His Ala His Val
325 330 335

Lys Pro Leu Leu Gln Lys Arg Pro Lys Pro Asp Glu Lys Tyr Tyr Ser
340 345 350

Ser Ser Ile Trp Gly Pro Thr Cys Asp Gly Leu Asp Arg Ile Val Glu
355 360 365

Arg Cys Asp Leu Pro Glu Met His Val Gly Asp Trp Met Leu Phe Glu
370 375 380

Asn Met Gly Ala Tyr Thr Val Ala Ala Ala Ser Thr Phe Asn Gly Phe
385 390 395 400

Gln Arg Pro Thr Ile Tyr Tyr Val Met Ser Gly Pro Ala Trp Gln Leu
405 410 415

Met Gln Gln Phe Gln Asn Pro Asp Phe Pro Pro Glu Val Glu Glu Gln
420 425 430

Asp Ala Ser Thr Leu Pro Val Ser Cys Ala Trp Glu Ser Gly Met Lys
435 440 445

Arg His Arg Ala Ala Cys Ala Ser Ala Ser Ile Asn Val
450 455 460

<210> 7
<211> 656
<212> PRT
<213> Homo sapiens

<400> 7

Met Ala Ser Thr Asp Tyr Ser Thr Tyr Ser Gln Ala Ala Ala Gln Gln
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Gly Tyr Ser Ala Tyr Thr Ala Gln Pro Thr Gln Gly Tyr Ala Gln Thr
20 25 30

Thr Gln Ala Tyr Gly Gln Gln Ser Tyr Gly Thr Tyr Gly Gln Pro Thr
35 40 45

Asp Val Ser Tyr Thr Gln Ala Gln Thr Thr Ala Thr Tyr Gly Gln Thr

50

55

60

Ala Tyr Ala Thr Ser Tyr Gly Gln Pro Pro Thr Gly Tyr Thr Thr Pro
65 70 75 80

Thr Ala Pro Gln Ala Tyr Ser Gln Pro Val Gln Gly Tyr Gly Thr Gly
85 90 95

Ala Tyr Asp Thr Thr Thr Ala Thr Val Thr Thr Thr Gln Ala Ser Tyr
100 105 110

Ala Ala Gln Ser Ala Tyr Gly Thr Gln Pro Ala Tyr Pro Ala Tyr Gly
115 120 125

Gln Gln Pro Ala Ala Thr Ala Pro Thr Arg Pro Gln Asp Gly Asn Lys
130 135 140

Pro Thr Glu Thr Ser Gln Pro Gln Ser Ser Thr Gly Gly Tyr Asn Gln
145 150 155 160

Pro Ser Leu Gly Tyr Gly Gln Ser Asn Tyr Ser Tyr Pro Gln Val Pro
165 170 175

Gly Ser Tyr Pro Met Gln Pro Val Thr Ala Pro Pro Ser Tyr Pro Pro
180 185 190

Thr Ser Tyr Ser Ser Thr Gln Pro Thr Ser Tyr Asp Gln Ser Ser Tyr
195 200 205

Ser Gln Gln Asn Thr Tyr Gly Gln Pro Ser Ser Tyr Gly Gln Gln Ser
210 215 220

Ser Tyr Gly Gln Gln Ser Ser Tyr Gly Gln Gln Pro Pro Thr Ser Tyr
225 230 235 240

Pro Pro Gln Thr Gly Ser Tyr Ser Gln Ala Pro Ser Gln Tyr Ser Gln
245 250 255

Gln Ser Ser Ser Tyr Gly Gln Gln Ser Ser Phe Arg Gln Asp His Pro
260 265 270

Ser Ser Met Gly Val Tyr Gly Gln Glu Ser Gly Gly Phe Ser Gly Pro
275 280 285

Gly Glu Asn Arg Ser Met Ser Gly Pro Asp Asn Arg Gly Arg Gly Arg
290 295 300

Gly Gly Phe Asp Arg Gly Gly Met Ser Arg Gly Gly Arg Gly Gly Gly
305 310 315 320

Arg Gly Gly Met Gly Ser Ala Gly Glu Arg Gly Gly Phe Asn Lys Pro
 325 330 335

Gly Gly Pro Met Asp Glu Gly Pro Asp Leu Asp Leu Gly Pro Pro Val
 340 345 350

Asp Pro Asp Glu Asp Ser Asp Asn Ser Ala Ile Tyr Val Gln Gly Leu
 355 360 365

Asn Asp Ser Val Thr Leu Asp Asp Leu Ala Asp Phe Phe Lys Gln Cys
 370 375 380

Gly Val Val Lys Met Asn Lys Arg Thr Gly Gln Pro Met Ile His Ile
 385 390 395 400

Tyr Leu Asp Lys Glu Thr Gly Lys Pro Lys Gly Asp Ala Thr Val Ser
 405 410 415

Tyr Glu Asp Pro Pro Thr Ala Lys Ala Ala Val Glu Trp Phe Asp Gly
 420 425 430

Lys Asp Phe Gln Gly Ser Lys Leu Lys Val Ser Leu Ala Arg Lys Lys
 435 440 445

Pro Pro Met Asn Ser Met Arg Gly Gly Leu Pro Pro Arg Glu Gly Arg
 450 455 460

Gly Met Pro Pro Pro Leu Arg Gly Gly Pro Gly Gly Pro Gly Gly Pro
 465 470 475 480

Gly Gly Pro Met Gly Arg Met Gly Gly Arg Gly Gly Asp Arg Gly Gly
 485 490 495

Phe Pro Pro Arg Gly Pro Arg Gly Ser Arg Gly Asn Pro Ser Gly Gly
 500 505 510

Gly Asn Val Gln His Arg Ala Gly Asp Trp Gln Cys Pro Asn Pro Gly
 515 520 525

Cys Gly Asn Gln Asn Phe Ala Trp Arg Thr Glu Cys Asn Gln Cys Lys
 530 535 540

Ala Pro Lys Pro Glu Gly Phe Leu Pro Pro Pro Phe Pro Pro Pro Gly
 545 550 555 560

Gly Asp Arg Gly Arg Gly Gly Pro Gly Gly Met Arg Gly Gly Arg Gly
 565 570 575

Gly Leu Met Asp Arg Gly Gly Pro Gly Gly Met Phe Arg Gly Gly Arg
580 585 590

Gly Gly Asp Arg Gly Gly Phe Arg Gly Gly Arg Gly Met Asp Arg Gly
595 600 605

Gly Phe Gly Gly Gly Arg Arg Gly Gly Pro Gly Gly Pro Pro Gly Pro
610 615 620

Leu Met Glu Gln Met Gly Gly Arg Arg Gly Gly Arg Gly Gly Pro Gly
625 630 635 640

Lys Met Asp Lys Gly Glu His Arg Gln Glu Arg Arg Asp Arg Pro Tyr
645 650 655

<210> 8
<211> 1052
<212> PRT
<213> Homo sapiens

<400> 8

Met Ala Ala Ala Tyr Leu Asp Pro Asn Leu Asn His Thr Pro Asn Ser
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Ser Thr Lys Thr His Leu Gly Thr Gly Met Glu Arg Ser Pro Gly Ala
20 25 30

Met Glu Arg Val Leu Lys Val Phe His Tyr Phe Glu Ser Asn Ser Glu
35 40 45

Pro Thr Thr Trp Ala Ser Ile Ile Arg His Gly Asp Ala Thr Asp Val
50 55 60

Arg Gly Ile Ile Gln Lys Ile Val Asp Ser His Lys Val Lys His Val
65 70 75 80

Ala Cys Tyr Gly Phe Arg Leu Ser His Leu Arg Ser Glu Glu Val His
85 90 95

Trp Leu His Val Asp Met Gly Val Ser Ser Val Arg Glu Lys Tyr Glu
100 105 110

Leu Ala His Pro Pro Glu Glu Trp Lys Tyr Glu Leu Arg Ile Arg Tyr
115 120 125

Leu Pro Lys Gly Phe Leu Asn Gln Phe Thr Glu Asp Lys Pro Thr Leu
130 135 140

Asn Phe Phe Tyr Gln Gln Val Lys Ser Asp Tyr Met Leu Glu Ile Ala

145		150		155		160									
Asp	Gln	Val	Asp	Gln	Glu	Ile	Ala	Leu	Lys	Leu	Gly	Cys	Leu	Glu	Ile
				165					170					175	
Arg	Arg	Ser	Tyr	Trp	Glu	Met	Arg	Gly	Asn	Ala	Leu	Glu	Lys	Lys	Ser
			180					185					190		
Asn	Tyr	Glu	Val	Leu	Glu	Lys	Asp	Val	Gly	Leu	Lys	Arg	Phe	Phe	Pro
		195					200					205			
Lys	Ser	Leu	Leu	Asp	Ser	Val	Lys	Ala	Lys	Thr	Leu	Arg	Lys	Leu	Ile
	210					215					220				
Gln	Gln	Thr	Phe	Arg	Gln	Phe	Ala	Asn	Leu	Asn	Arg	Glu	Glu	Ser	Ile
225					230					235					240
Leu	Lys	Phe	Phe	Glu	Ile	Leu	Ser	Pro	Val	Tyr	Arg	Phe	Asp	Lys	Glu
				245					250					255	
Cys	Phe	Lys	Cys	Ala	Leu	Gly	Ser	Ser	Trp	Ile	Ile	Ser	Val	Glu	Leu
			260					265					270		
Ala	Ile	Gly	Pro	Glu	Glu	Gly	Ile	Ser	Tyr	Leu	Thr	Asp	Lys	Gly	Cys
		275					280					285			
Asn	Pro	Thr	His	Leu	Ala	Asp	Phe	Thr	Gln	Val	Gln	Thr	Ile	Gln	Tyr
	290					295					300				
Ser	Asn	Ser	Glu	Asp	Lys	Asp	Arg	Lys	Gly	Met	Leu	Gln	Leu	Lys	Ile
305					310					315					320
Ala	Gly	Ala	Pro	Glu	Pro	Leu	Thr	Val	Thr	Ala	Pro	Ser	Leu	Thr	Ile
				325					330					335	
Ala	Glu	Asn	Met	Ala	Asp	Leu	Ile	Asp	Gly	Tyr	Cys	Arg	Leu	Val	Asn
			340					345					350		
Gly	Thr	Ser	Gln	Ser	Phe	Ile	Ile	Arg	Pro	Gln	Lys	Glu	Gly	Glu	Arg
		355					360					365			
Ala	Leu	Pro	Ser	Ile	Pro	Lys	Leu	Ala	Asn	Ser	Glu	Lys	Gln	Gly	Met
	370					375					380				
Arg	Thr	His	Ala	Val	Ser	Val	Ser	Glu	Thr	Asp	Asp	Tyr	Ala	Glu	Ile
385					390					395					400
Ile	Asp	Glu	Glu	Asp	Thr	Tyr	Thr	Met	Pro	Ser	Thr	Arg	Asp	Tyr	Glu
				405					410					415	

Ile Gln Arg Glu Arg Ile Glu Leu Gly Arg Cys Ile Gly Glu Gly Gln
 420 425 430

Phe Gly Asp Val His Gln Gly Ile Tyr Met Ser Pro Glu Asn Pro Ala
 435 440 445

Leu Ala Val Ala Ile Lys Thr Cys Lys Asn Cys Thr Ser Asp Ser Val
 450 455 460

Arg Glu Lys Phe Leu Gln Glu Ala Leu Thr Met Arg Gln Phe Asp His
 465 470 475 480

Pro His Ile Val Lys Leu Ile Gly Val Ile Thr Glu Asn Pro Val Trp
 485 490 495

Ile Ile Met Glu Leu Cys Thr Leu Gly Glu Leu Arg Ser Phe Leu Gln
 500 505 510

Val Arg Lys Tyr Ser Leu Asp Leu Ala Ser Leu Ile Leu Tyr Ala Tyr
 515 520 525

Gln Leu Ser Thr Ala Leu Ala Tyr Leu Glu Ser Lys Arg Phe Val His
 530 535 540

Arg Asp Ile Ala Ala Arg Asn Val Leu Val Ser Ser Asn Asp Cys Val
 545 550 555 560

Lys Leu Gly Asp Phe Gly Leu Ser Arg Tyr Met Glu Asp Ser Thr Tyr
 565 570 575

Tyr Lys Ala Ser Lys Gly Lys Leu Pro Ile Lys Trp Met Ala Pro Glu
 580 585 590

Ser Ile Asn Phe Arg Arg Phe Thr Ser Ala Ser Asp Val Trp Met Phe
 595 600 605

Gly Val Cys Met Trp Glu Ile Leu Met His Gly Val Lys Pro Phe Gln
 610 615 620

Gly Val Lys Asn Asn Asp Val Ile Gly Arg Ile Glu Asn Gly Glu Arg
 625 630 635 640

Leu Pro Met Pro Pro Asn Cys Pro Pro Thr Leu Tyr Ser Leu Met Thr
 645 650 655

Lys Cys Trp Ala Tyr Asp Pro Ser Arg Arg Pro Arg Phe Thr Glu Leu
 660 665 670

Lys Ala Gln Leu Ser Thr Ile Leu Glu Glu Glu Lys Ala Gln Gln Glu
 675 680 685

Glu Arg Met Arg Met Glu Ser Arg Arg Gln Ala Thr Val Ser Trp Asp
 690 695 700

Ser Gly Gly Ser Asp Glu Ala Pro Pro Lys Pro Ser Arg Pro Gly Tyr
 705 710 715 720

Pro Ser Pro Arg Ser Ser Glu Gly Phe Tyr Pro Ser Pro Gln His Met
 725 730 735

Val Gln Thr Asn His Tyr Gln Val Ser Gly Tyr Pro Gly Ser His Gly
 740 745 750

Ile Thr Ala Met Ala Gly Ser Ile Tyr Pro Gly Gln Ala Ser Leu Leu
 755 760 765

Asp Gln Thr Asp Ser Trp Asn His Arg Pro Gln Glu Ile Ala Met Trp
 770 775 780

Gln Pro Asn Val Glu Asp Ser Thr Val Leu Asp Leu Arg Gly Ile Gly
 785 790 795 800

Gln Val Leu Pro Thr His Leu Met Glu Glu Arg Leu Ile Arg Gln Gln
 805 810 815

Gln Glu Met Glu Glu Asp Gln Arg Trp Leu Glu Lys Glu Glu Arg Phe
 820 825 830

Leu Lys Pro Asp Val Arg Leu Ser Arg Gly Ser Ile Asp Arg Glu Asp
 835 840 845

Gly Ser Leu Gln Gly Pro Ile Gly Asn Gln His Ile Tyr Gln Pro Val
 850 855 860

Gly Lys Pro Asp Pro Ala Ala Pro Pro Lys Lys Pro Pro Arg Pro Gly
 865 870 875 880

Ala Pro Gly His Leu Gly Ser Leu Ala Ser Leu Ser Ser Pro Ala Asp
 885 890 895

Ser Tyr Asn Glu Gly Val Lys Leu Gln Pro Gln Glu Ile Ser Pro Pro
 900 905 910

Pro Thr Ala Asn Leu Asp Arg Ser Asn Asp Lys Val Tyr Glu Asn Val
 915 920 925

Thr Gly Leu Val Lys Ala Val Ile Glu Met Ser Ser Lys Ile Gln Pro
 930 935 940
 Ala Pro Pro Glu Glu Tyr Val Pro Met Val Lys Glu Val Gly Leu Ala
 945 950 955 960
 Leu Arg Thr Leu Leu Ala Thr Val Asp Glu Thr Ile Pro Leu Leu Pro
 965 970 975
 Ala Ser Thr His Arg Glu Ile Glu Met Ala Gln Lys Leu Leu Asn Ser
 980 985 990
 Asp Leu Gly Glu Leu Ile Asn Lys Met Lys Leu Ala Gln Gln Tyr Val
 995 1000 1005
 Met Thr Ser Leu Gln Gln Glu Tyr Lys Lys Gln Met Leu Thr Ala
 1010 1015 1020
 Ala His Ala Leu Ala Val Asp Ala Lys Asn Leu Leu Asp Val Ile
 1025 1030 1035
 Asp Gln Ala Arg Leu Lys Met Leu Gly Gln Thr Arg Pro His
 1040 1045 1050
 <210> 9
 <211> 197
 <212> PRT
 <213> Homo sapiens
 <220>
 <221> MISC_FEATURE
 <222> (73)..(73)
 <223> X = selenocysteine (U)
 <400> 9
 Met Ser Leu Gly Arg Leu Cys Arg Leu Leu Lys Pro Ala Leu Leu Cys
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 Gly Ala Leu Ala Ala Pro Gly Leu Ala Gly Thr Met Cys Ala Ser Arg
 20 25 30
 Asp Asp Trp Arg Cys Ala Arg Ser Met His Glu Phe Ser Ala Lys Asp
 35 40 45
 Ile Asp Gly His Met Val Asn Leu Asp Lys Tyr Arg Gly Phe Val Cys
 50 55 60
 Ile Val Thr Asn Val Ala Ser Gln Xaa Gly Lys Thr Glu Val Asn Tyr
 65 70 75 80

Thr Gln Leu Val Asp Leu His Ala Arg Tyr Ala Glu Cys Gly Leu Arg
85 90 95

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

Asn Glu Glu Ile Lys Glu Phe Ala Ala Gly Tyr Asn Val Lys Phe Asp
115 120 125

Met Phe Ser Lys Ile Cys Val Asn Gly Asp Asp Ala His Pro Leu Trp
130 135 140

Lys Trp Met Lys Ile Gln Pro Lys Gly Lys Gly Ile Leu Gly Asn Ala
145 150 155 160

Ile Lys Trp Asn Phe Thr Lys Phe Leu Ile Asp Lys Asn Gly Cys Val
165 170 175

Val Lys Arg Tyr Gly Pro Met Glu Glu Pro Leu Val Ile Glu Lys Asp
180 185 190

Leu Pro His Tyr Phe
195

<210> 10
<211> 209
<212> PRT
<213> Homo sapiens

<400> 10

Met Gly Lys Gly Asp Pro Asn Lys Pro Arg Gly Lys Met Ser Ser Tyr
1 5 10 15

Ala Phe Phe Val Gln Thr Cys Arg Glu Glu His Lys Lys Lys His Pro
20 25 30

Asp Ser Ser Val Asn Phe Ala Glu Phe Ser Lys Lys Cys Ser Glu Arg
35 40 45

Trp Lys Thr Met Ser Ala Lys Glu Lys Ser Lys Phe Glu Asp Met Ala
50 55 60

Lys Ser Asp Lys Ala Arg Tyr Asp Arg Glu Met Lys Asn Tyr Val Pro
65 70 75 80

Pro Lys Gly Asp Lys Lys Gly Lys Lys Lys Asp Pro Asn Ala Pro Lys
85 90 95

Arg Pro Pro Ser Ala Phe Phe Leu Phe Cys Ser Glu His Arg Pro Lys
100 105 110

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

Leu Gly Glu Met Trp Ser Glu Gln Ser Ala Lys Asp Lys Gln Pro Tyr
130 135 140

Glu Gln Lys Ala Ala Lys Leu Lys Glu Lys Tyr Glu Lys Asp Ile Ala
145 150 155 160

Ala Tyr Arg Ala Lys Gly Lys Ser Glu Ala Gly Lys Lys Gly Pro Gly
165 170 175

Arg Pro Thr Gly Ser Lys Lys Lys Asn Glu Pro Glu Asp Glu Glu Glu
180 185 190

Glu Glu Glu Glu Glu Asp Glu Asp Glu Glu Glu Glu Asp Glu Asp Glu
195 200 205

Glu

<210> 11
<211> 153
<212> PRT
<213> Homo sapiens
<400> 11

Met Gly Lys Ile Ser Ser Leu Pro Thr Gln Leu Phe Lys Cys Cys Phe
1 5 10 15

Cys Asp Phe Leu Lys Val Lys Met His Thr Met Ser Ser Ser His Leu
20 25 30

Phe Tyr Leu Ala Leu Cys Leu Leu Thr Phe Thr Ser Ser Ala Thr Ala
35 40 45

Gly Pro Glu Thr Leu Cys Gly Ala Glu Leu Val Asp Ala Leu Gln Phe
50 55 60

Val Cys Gly Asp Arg Gly Phe Tyr Phe Asn Lys Pro Thr Gly Tyr Gly
65 70 75 80

Ser Ser Ser Arg Arg Ala Pro Gln Thr Gly Ile Val Asp Glu Cys Cys
85 90 95

Phe Arg Ser Cys Asp Leu Arg Arg Leu Glu Met Tyr Cys Ala Pro Leu
100 105 110

Lys Pro Ala Lys Ser Ala Arg Ser Val Arg Ala Gln Arg His Thr Asp
 115 120 125

Met Pro Lys Thr Gln Lys Glu Val His Leu Lys Asn Ala Ser Arg Gly
 130 135 140

Ser Ala Gly Asn Lys Asn Tyr Arg Met
 145 150

<210> 12
 <211> 1338
 <212> PRT
 <213> Homo sapiens

<400> 12

Met Ala Ser Pro Pro Arg His Gly Pro Pro Gly Pro Ala Ser Gly Asp
 1 5 10 15

Gly Pro Asn Leu Asn Asn Asn Asn Asn Asn Asn His Ser Val Arg
 20 25 30

Lys Cys Gly Tyr Leu Arg Lys Gln Lys His Gly His Lys Arg Phe Phe
 35 40 45

Val Leu Arg Gly Pro Gly Ala Gly Gly Asp Glu Ala Thr Ala Gly Gly
 50 55 60

Gly Ser Ala Pro Gln Pro Pro Arg Leu Glu Tyr Tyr Glu Ser Glu Lys
 65 70 75 80

Lys Trp Arg Ser Lys Ala Gly Ala Pro Lys Arg Val Ile Ala Leu Asp
 85 90 95

Cys Cys Leu Asn Ile Asn Lys Arg Ala Asp Ala Lys His Lys Tyr Leu
 100 105 110

Ile Ala Leu Tyr Thr Lys Asp Glu Tyr Phe Ala Val Ala Ala Glu Asn
 115 120 125

Glu Gln Glu Gln Glu Gly Trp Tyr Arg Ala Leu Thr Asp Leu Val Ser
 130 135 140

Glu Gly Arg Ala Ala Ala Gly Asp Ala Pro Pro Ala Ala Ala Pro Ala
 145 150 155 160

Ala Ser Cys Ser Ala Ser Leu Pro Gly Ala Leu Gly Gly Ser Ala Gly
 165 170 175

Ala Ala Gly Ala Glu Asp Ser Tyr Gly Leu Val Ala Pro Ala Thr Ala
 180 185 190

Ala Tyr Arg Glu Val Trp Gln Val Asn Leu Lys Pro Lys Gly Leu Gly
 195 200 205

Gln Ser Lys Asn Leu Thr Gly Val Tyr Arg Leu Cys Leu Ser Ala Arg
 210 215 220

Thr Ile Gly Phe Val Lys Leu Asn Cys Glu Gln Pro Ser Val Thr Leu
 225 230 235 240

Gln Leu Met Asn Ile Arg Arg Cys Gly His Ser Asp Ser Phe Phe Phe
 245 250 255

Ile Glu Val Gly Arg Ser Ala Val Thr Gly Pro Gly Glu Leu Trp Met
 260 265 270

Gln Ala Asp Asp Ser Val Val Ala Gln Asn Ile His Glu Thr Ile Leu
 275 280 285

Glu Ala Met Lys Ala Leu Lys Glu Leu Phe Glu Phe Arg Pro Arg Ser
 290 295 300

Lys Ser Gln Ser Ser Gly Ser Ser Ala Thr His Pro Ile Ser Val Pro
 305 310 315 320

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

Gly Leu Val Arg Arg Ser Arg Thr Asp Ser Leu Ala Ala Thr Pro Pro
 340 345 350

Ala Ala Lys Cys Ser Ser Cys Arg Val Arg Thr Ala Ser Glu Gly Asp
 355 360 365

Gly Gly Ala Ala Ala Gly Ala Ala Ala Ala Gly Ala Arg Pro Val Ser
 370 375 380

Val Ala Gly Ser Pro Leu Ser Pro Gly Pro Val Arg Ala Pro Leu Ser
 385 390 395 400

Arg Ser His Thr Leu Ser Gly Gly Cys Gly Gly Arg Gly Ser Lys Val
 405 410 415

Ala Leu Leu Pro Ala Gly Gly Ala Leu Gln His Ser Arg Ser Met Ser
 420 425 430

Met Pro Val Ala His Ser Pro Pro Ala Ala Thr Ser Pro Gly Ser Leu
 435 440 445

Ser Ser Ser Ser Gly His Gly Ser Gly Ser Tyr Pro Pro Pro Pro Gly
 450 455 460

Pro His Pro Pro Leu Pro His Pro Leu His His Gly Pro Gly Gln Arg
 465 470 475 480

Pro Ser Ser Gly Ser Ala Ser Ala Ser Gly Ser Pro Ser Asp Pro Gly
 485 490 495

Phe Met Ser Leu Asp Glu Tyr Gly Ser Ser Pro Gly Asp Leu Arg Ala
 500 505 510

Phe Cys Ser His Arg Ser Asn Thr Pro Glu Ser Ile Ala Glu Thr Pro
 515 520 525

Pro Ala Arg Asp Gly Gly Gly Gly Glu Phe Tyr Gly Tyr Met Thr
 530 535 540

Met Asp Arg Pro Leu Ser His Cys Gly Arg Ser Tyr Arg Arg Val Ser
 545 550 555 560

Gly Asp Ala Ala Gln Asp Leu Asp Arg Gly Leu Arg Lys Arg Thr Tyr
 565 570 575

Ser Leu Thr Thr Pro Ala Arg Gln Arg Pro Val Pro Gln Pro Ser Ser
 580 585 590

Ala Ser Leu Asp Glu Tyr Thr Leu Met Arg Ala Thr Phe Ser Gly Ser
 595 600 605

Ala Gly Arg Leu Cys Pro Ser Cys Pro Ala Ser Ser Pro Lys Val Ala
 610 615 620

Tyr His Pro Tyr Pro Glu Asp Tyr Gly Asp Ile Glu Ile Gly Ser His
 625 630 635 640

Arg Ser Ser Ser Ser Asn Leu Gly Ala Asp Asp Gly Tyr Met Pro Met
 645 650 655

Thr Pro Gly Ala Ala Leu Ala Gly Ser Gly Ser Gly Ser Cys Arg Ser
 660 665 670

Asp Asp Tyr Met Pro Met Ser Pro Ala Ser Val Ser Ala Pro Lys Gln
 675 680 685

Ile Leu Gln Pro Arg Ala Ala Ala Ala Ala Ala Ala Val Pro Ser
 690 695 700

Ala Gly Pro Ala Gly Pro Ala Pro Thr Ser Ala Ala Gly Arg Thr Phe
705 710 715 720

Pro Ala Ser Gly Gly Gly Tyr Lys Ala Ser Ser Pro Ala Glu Ser Ser
725 730 735

Pro Glu Asp Ser Gly Tyr Met Arg Met Trp Cys Gly Ser Lys Leu Ser
740 745 750

Met Glu His Ala Asp Gly Lys Leu Leu Pro Asn Gly Asp Tyr Leu Asn
755 760 765

Val Ser Pro Ser Asp Ala Val Thr Thr Gly Thr Pro Pro Asp Phe Phe
770 775 780

Ser Ala Ala Leu His Pro Gly Gly Glu Pro Leu Arg Gly Val Pro Gly
785 790 795 800

Cys Cys Tyr Ser Ser Leu Pro Arg Ser Tyr Lys Ala Pro Tyr Thr Cys
805 810 815

Gly Gly Asp Ser Asp Gln Tyr Val Leu Met Ser Ser Pro Val Gly Arg
820 825 830

Ile Leu Glu Glu Glu Arg Leu Glu Pro Gln Ala Thr Pro Gly Pro Ser
835 840 845

Gln Ala Ala Ser Ala Phe Gly Ala Gly Pro Thr Gln Pro Pro His Pro
850 855 860

Val Val Pro Ser Pro Val Arg Pro Ser Gly Gly Arg Pro Glu Gly Phe
865 870 875 880

Leu Gly Gln Arg Gly Arg Ala Val Arg Pro Thr Arg Leu Ser Leu Glu
885 890 895

Gly Leu Pro Ser Leu Pro Ser Met His Glu Tyr Pro Leu Pro Pro Glu
900 905 910

Pro Lys Ser Pro Gly Glu Tyr Ile Asn Ile Asp Phe Gly Glu Pro Gly
915 920 925

Ala Arg Leu Ser Pro Pro Ala Pro Pro Leu Leu Ala Ser Ala Ala Ser
930 935 940

Ser Ser Ser Leu Leu Ser Ala Ser Ser Pro Ala Ser Ser Leu Gly Ser
945 950 955 960

Gly Thr Pro Gly Thr Ser Ser Asp Ser Arg Gln Arg Ser Pro Leu Ser

965

970

975

Asp Tyr Met Asn Leu Asp Phe Ser Ser Pro Lys Ser Pro Lys Pro Gly
 980 985 990

Ala Pro Ser Gly His Pro Val Gly Ser Leu Asp Gly Leu Leu Ser Pro
 995 1000 1005

Glu Ala Ser Ser Pro Tyr Pro Pro Leu Pro Pro Arg Pro Ser Ala
 1010 1015 1020

Ser Pro Ser Ser Ser Leu Gln Pro Pro Pro Pro Pro Pro Ala Pro
 1025 1030 1035

Gly Glu Leu Tyr Arg Leu Pro Pro Ala Ser Ala Val Ala Thr Ala
 1040 1045 1050

Gln Gly Pro Gly Ala Ala Ser Ser Leu Ser Ser Asp Thr Gly Asp
 1055 1060 1065

Asn Gly Asp Tyr Thr Glu Met Ala Phe Gly Val Ala Ala Thr Pro
 1070 1075 1080

Pro Gln Pro Ile Ala Ala Pro Pro Lys Pro Glu Ala Ala Arg Val
 1085 1090 1095

Ala Ser Pro Thr Ser Gly Val Lys Arg Leu Ser Leu Met Glu Gln
 1100 1105 1110

Val Ser Gly Val Glu Ala Phe Leu Gln Ala Ser Gln Pro Pro Asp
 1115 1120 1125

Pro His Arg Gly Ala Lys Val Ile Arg Ala Asp Pro Gln Gly Gly
 1130 1135 1140

Arg Arg Arg His Ser Ser Glu Thr Phe Ser Ser Thr Thr Thr Val
 1145 1150 1155

Thr Pro Val Ser Pro Ser Phe Ala His Asn Pro Lys Arg His Asn
 1160 1165 1170

Ser Ala Ser Val Glu Asn Val Ser Leu Arg Lys Ser Ser Glu Gly
 1175 1180 1185

Gly Val Gly Val Gly Pro Gly Gly Gly Asp Glu Pro Pro Thr Ser
 1190 1195 1200

Pro Arg Gln Leu Gln Pro Ala Pro Pro Leu Ala Pro Gln Gly Arg
 1205 1210 1215

Pro Trp Thr Pro Gly Gln Pro Gly Gly Leu Val Gly Cys Pro Gly
1220 1225 1230

Ser Gly Gly Ser Pro Met Arg Arg Glu Thr Ser Ala Gly Phe Gln
1235 1240 1245

Asn Gly Leu Asn Tyr Ile Ala Ile Asp Val Arg Glu Glu Pro Gly
1250 1255 1260

Leu Pro Pro Gln Pro Gln Pro Pro Pro Pro Pro Leu Pro Gln Pro
1265 1270 1275

Gly Asp Lys Ser Ser Trp Gly Arg Thr Arg Ser Leu Gly Gly Leu
1280 1285 1290

Ile Ser Ala Val Gly Val Gly Ser Thr Gly Gly Gly Cys Gly Gly
1295 1300 1305

Pro Gly Pro Gly Ala Leu Pro Pro Ala Asn Thr Tyr Ala Ser Ile
1310 1315 1320

Asp Phe Leu Ser His His Leu Lys Glu Ala Thr Ile Val Lys Glu
1325 1330 1335

<210> 13
<211> 483
<212> PRT
<213> Homo sapiens

<400> 13

Met Ser Ile Arg Val Thr Gln Lys Ser Tyr Lys Val Ser Thr Ser Gly
1 5 10 15

Pro Arg Ala Phe Ser Ser Arg Ser Tyr Thr Ser Gly Pro Gly Ser Arg
20 25 30

Ile Ser Ser Ser Ser Phe Ser Arg Val Gly Ser Ser Asn Phe Arg Gly
35 40 45

Gly Leu Gly Gly Gly Tyr Gly Gly Ala Ser Gly Met Gly Gly Ile Thr
50 55 60

Ala Val Thr Val Asn Gln Ser Leu Leu Ser Pro Leu Val Leu Glu Val
65 70 75 80

Asp Pro Asn Ile Gln Ala Val Arg Thr Gln Glu Lys Glu Gln Ile Lys
85 90 95

Thr Leu Asn Asn Lys Phe Ala Ser Phe Ile Asp Lys Val Arg Phe Leu
 100 105 110
 Glu Gln Gln Asn Lys Met Leu Glu Thr Lys Trp Ser Leu Leu Gln Gln
 115 120 125
 Gln Lys Thr Ala Arg Ser Asn Met Asp Asn Met Phe Glu Ser Tyr Ile
 130 135 140
 Asn Asn Leu Arg Arg Gln Leu Glu Thr Leu Gly Gln Glu Lys Leu Lys
 145 150 155 160
 Leu Glu Ala Glu Leu Gly Asn Met Gln Gly Leu Val Glu Asp Phe Lys
 165 170 175
 Asn Lys Tyr Glu Asp Glu Ile Asn Lys Arg Thr Glu Met Glu Asn Glu
 180 185 190
 Phe Val Leu Ile Lys Lys Asp Val Asp Glu Ala Tyr Met Asn Lys Val
 195 200 205
 Glu Leu Glu Ser Arg Leu Glu Gly Leu Thr Asp Glu Ile Asn Phe Leu
 210 215 220
 Arg Gln Leu Tyr Glu Glu Glu Ile Arg Glu Leu Gln Ser Gln Ile Ser
 225 230 235 240
 Asp Thr Ser Val Val Leu Ser Met Asp Asn Ser Arg Ser Leu Asp Met
 245 250 255
 Asp Ser Ile Ile Ala Glu Val Lys Ala Gln Tyr Glu Asp Ile Ala Asn
 260 265 270
 Arg Ser Arg Ala Glu Ala Glu Ser Met Tyr Gln Ile Lys Tyr Glu Glu
 275 280 285
 Leu Gln Ser Leu Ala Gly Lys His Gly Asp Asp Leu Arg Arg Thr Lys
 290 295 300
 Thr Glu Ile Ser Glu Met Asn Arg Asn Ile Ser Arg Leu Gln Ala Glu
 305 310 315 320
 Ile Glu Gly Leu Lys Gly Gln Arg Ala Ser Leu Glu Ala Ala Ile Ala
 325 330 335
 Asp Ala Glu Gln Arg Gly Glu Leu Ala Ile Lys Asp Ala Asn Ala Lys
 340 345 350
 Leu Ser Glu Leu Glu Ala Ala Leu Gln Arg Ala Lys Gln Asp Met Ala

355

360

365

Arg Gln Leu Arg Glu Tyr Gln Glu Leu Met Asn Val Lys Leu Ala Leu
 370 375 380

Asp Ile Glu Ile Ala Thr Tyr Arg Lys Leu Leu Glu Gly Glu Glu Ser
 385 390 395 400

Arg Leu Glu Ser Gly Met Gln Asn Met Ser Ile His Thr Lys Thr Thr
 405 410 415

Ser Gly Tyr Ala Gly Gly Leu Ser Ser Ala Tyr Gly Gly Leu Thr Ser
 420 425 430

Pro Gly Leu Ser Tyr Ser Leu Gly Ser Ser Phe Gly Ser Gly Ala Gly
 435 440 445

Ser Ser Ser Phe Ser Arg Thr Ser Ser Ser Arg Ala Val Val Val Lys
 450 455 460

Lys Ile Glu Thr Arg Asp Gly Lys Leu Val Ser Glu Ser Ser Asp Val
 465 470 475 480

Leu Pro Lys

<210> 14
 <211> 372
 <212> PRT
 <213> Homo sapiens

<400> 14

Met Ile Phe Pro Trp Lys Cys Gln Ser Thr Gln Arg Asp Leu Trp Asn
 1 5 10 15

Ile Phe Lys Leu Trp Gly Trp Thr Met Leu Cys Cys Asp Phe Leu Ala
 20 25 30

His His Gly Thr Asp Cys Trp Thr Tyr His Tyr Ser Glu Lys Pro Met
 35 40 45

Asn Trp Gln Arg Ala Arg Arg Phe Cys Arg Asp Asn Tyr Thr Asp Leu
 50 55 60

Val Ala Ile Gln Asn Lys Ala Glu Ile Glu Tyr Leu Glu Lys Thr Leu
 65 70 75 80

Pro Phe Ser Arg Ser Tyr Tyr Trp Ile Gly Ile Arg Lys Ile Gly Gly
 85 90 95

Ile Trp Thr Trp Val Gly Thr Asn Lys Ser Leu Thr Glu Glu Ala Glu
 100 105 110

Asn Trp Gly Asp Gly Glu Pro Asn Asn Lys Lys Asn Lys Glu Asp Cys
 115 120 125

Val Glu Ile Tyr Ile Lys Arg Asn Lys Asp Ala Gly Lys Trp Asn Asp
 130 135 140

Asp Ala Cys His Lys Leu Lys Ala Ala Leu Cys Tyr Thr Ala Ser Cys
 145 150 155 160

Gln Pro Trp Ser Cys Ser Gly His Gly Glu Cys Val Glu Ile Ile Asn
 165 170 175

Asn Tyr Thr Cys Asn Cys Asp Val Gly Tyr Tyr Gly Pro Gln Cys Gln
 180 185 190

Phe Val Ile Gln Cys Glu Pro Leu Glu Ala Pro Glu Leu Gly Thr Met
 195 200 205

Asp Cys Thr His Pro Leu Gly Asn Phe Ser Phe Ser Ser Gln Cys Ala
 210 215 220

Phe Ser Cys Ser Glu Gly Thr Asn Leu Thr Gly Ile Glu Glu Thr Thr
 225 230 235 240

Cys Gly Pro Phe Gly Asn Trp Ser Ser Pro Glu Pro Thr Cys Gln Val
 245 250 255

Ile Gln Cys Glu Pro Leu Ser Ala Pro Asp Leu Gly Ile Met Asn Cys
 260 265 270

Ser His Pro Leu Ala Ser Phe Ser Phe Thr Ser Ala Cys Thr Phe Ile
 275 280 285

Cys Ser Glu Gly Thr Glu Leu Ile Gly Lys Lys Lys Thr Ile Cys Glu
 290 295 300

Ser Ser Gly Ile Trp Ser Asn Pro Ser Pro Ile Cys Gln Lys Leu Asp
 305 310 315 320

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

Pro Val Ala Val Met Val Thr Ala Phe Ser Gly Leu Ala Phe Ile Ile
 340 345 350

Trp Leu Ala Arg Arg Leu Lys Lys Gly Lys Lys Ser Lys Arg Ser Met
 355 360 365

Asn Asp Pro Tyr
 370

<210> 15
 <211> 209
 <212> PRT
 <213> Homo sapiens

<400> 15

Met Glu Leu Asn Ser Leu Leu Ile Leu Leu Glu Ala Ala Glu Tyr Leu
 1 5 10 15

Glu Arg Arg Asp Arg Glu Ala Glu His Gly Tyr Ala Ser Val Leu Pro
 20 25 30

Phe Asp Gly Asp Phe Ala Arg Glu Lys Thr Lys Ala Ala Gly Leu Val
 35 40 45

Arg Lys Ala Pro Asn Asn Arg Ser Ser His Asn Glu Leu Glu Lys His
 50 55 60

Arg Arg Ala Lys Leu Arg Leu Tyr Leu Glu Gln Leu Lys Gln Leu Val
 65 70 75 80

Pro Leu Gly Pro Asp Ser Thr Arg His Thr Thr Leu Ser Leu Leu Lys
 85 90 95

Arg Ala Lys Val His Ile Lys Lys Leu Glu Glu Gln Asp Arg Arg Ala
 100 105 110

Leu Ser Ile Lys Glu Gln Leu Gln Gln Glu His Arg Phe Leu Lys Arg
 115 120 125

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

Ser Thr Gly Ser Ala Val Ser Thr Asp Asp Ser Glu Gln Glu Val Asp
 145 150 155 160

Ile Glu Gly Met Glu Phe Gly Pro Gly Glu Leu Asp Ser Val Gly Ser
 165 170 175

Ser Ser Asp Ala Asp Asp His Tyr Ser Leu Gln Ser Gly Thr Gly Gly
 180 185 190

Asp Ser Gly Phe Gly Pro His Cys Arg Arg Leu Gly Arg Pro Ala Leu
 195 200 205

Ser

<210> 16
<211> 600
<212> PRT
<213> Homo sapiens

<400> 16

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

His Val Leu Glu Val Val Gln Arg Asp Phe Asp Leu Arg Arg Lys Glu
20 25 30

Glu Glu Arg Leu Glu Ala Leu Lys Gly Lys Ile Lys Lys Glu Ser Ser
35 40 45

Lys Arg Glu Leu Leu Ser Asp Thr Ala His Leu Asn Glu Thr His Cys
50 55 60

Ala Arg Cys Leu Gln Pro Tyr Gln Leu Leu Val Asn Ser Lys Arg Gln
65 70 75 80

Cys Leu Glu Cys Gly Leu Phe Thr Cys Lys Ser Cys Gly Arg Val His
85 90 95

Pro Glu Glu Gln Gly Trp Ile Cys Asp Pro Cys His Leu Ala Arg Val
100 105 110

Val Lys Ile Gly Ser Leu Glu Trp Tyr Tyr Glu His Val Lys Ala Arg
115 120 125

Phe Lys Arg Phe Gly Ser Ala Lys Val Ile Arg Ser Leu His Gly Arg
130 135 140

Leu Gln Gly Gly Ala Gly Pro Glu Leu Ile Ser Glu Glu Arg Ser Gly
145 150 155 160

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

Ala Gln Ala Gln Pro Phe Gly Ser Lys Lys Lys Arg Leu Leu Ser Val
180 185 190

His Asp Phe Asp Phe Glu Gly Asp Ser Asp Asp Ser Thr Gln Pro Gln
195 200 205

Gly His Ser Leu His Leu Ser Ser Val Pro Glu Ala Arg Asp Ser Pro
210 215 220

Gln Ser Leu Thr Asp Glu Ser Cys Ser Glu Lys Ala Ala Pro His Lys
225 230 235 240

Ala Glu Gly Leu Glu Glu Ala Asp Thr Gly Ala Ser Gly Cys His Ser
245 250 255

His Pro Glu Glu Gln Pro Thr Ser Ile Ser Pro Ser Arg His Gly Ala
260 265 270

Leu Ala Glu Leu Cys Pro Pro Gly Gly Ser His Arg Met Ala Leu Gly
275 280 285

Thr Ala Ala Ala Leu Gly Ser Asn Val Ile Arg Asn Glu Gln Leu Pro
290 295 300

Leu Gln Tyr Leu Ala Asp Val Asp Thr Ser Asp Glu Glu Ser Ile Arg
305 310 315 320

Ala His Val Met Ala Ser His His Ser Lys Arg Arg Gly Arg Ala Ser
325 330 335

Ser Glu Ser Gln Ile Phe Glu Leu Asn Lys His Ile Ser Ala Val Glu
340 345 350

Cys Leu Leu Thr Tyr Leu Glu Asn Thr Val Val Pro Pro Leu Ala Lys
355 360 365

Gly Leu Gly Ala Gly Val Arg Thr Glu Ala Asp Val Glu Glu Glu Ala
370 375 380

Leu Arg Arg Lys Leu Glu Glu Leu Thr Ser Asn Val Ser Asp Gln Glu
385 390 395 400

Thr Ser Ser Glu Glu Glu Glu Ala Lys Asp Glu Lys Ala Glu Pro Asn
405 410 415

Arg Asp Lys Ser Val Gly Pro Leu Pro Gln Ala Asp Pro Glu Val Gly
420 425 430

Thr Ala Ala His Gln Thr Asn Arg Gln Glu Lys Ser Pro Gln Asp Pro
435 440 445

Gly Asp Pro Val Gln Tyr Asn Arg Thr Thr Asp Glu Glu Leu Ser Glu
450 455 460

Leu Glu Asp Arg Val Ala Val Thr Ala Ser Glu Val Gln Gln Ala Glu

465 470 475 480
 Ser Glu Val Ser Asp Ile Glu Ser Arg Ile Ala Ala Leu Arg Ala Ala
 485 490 495
 Gly Leu Thr Val Lys Pro Ser Gly Lys Pro Arg Arg Lys Ser Asn Leu
 500 505 510
 Pro Ile Phe Leu Pro Arg Val Ala Gly Lys Leu Gly Lys Arg Pro Glu
 515 520 525
 Asp Pro Asn Ala Asp Pro Ser Ser Glu Ala Lys Ala Met Ala Val Pro
 530 535 540
 Tyr Leu Leu Arg Arg Lys Phe Ser Asn Ser Leu Lys Ser Gln Gly Lys
 545 550 555 560
 Asp Asp Asp Ser Phe Asp Arg Lys Ser Val Tyr Arg Gly Ser Leu Thr
 565 570 575
 Gln Arg Asn Pro Asn Ala Arg Lys Gly Met Ala Ser His Thr Phe Ala
 580 585 590
 Lys Pro Val Val Ala His Gln Ser
 595 600

 <210> 17
 <211> 367
 <212> PRT
 <213> Homo sapiens

 <400> 17

 Met Ser Ser Pro Pro Pro Ala Arg Ser Gly Phe Tyr Arg Gln Glu Val
 1 5 10 15

 Thr Lys Thr Ala Trp Glu Val Arg Ala Val Tyr Arg Asp Leu Gln Pro
 20 25 30

 Val Gly Ser Gly Ala Tyr Gly Ala Val Cys Ser Ala Val Asp Gly Arg
 35 40 45

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

 Glu Leu Phe Ala Lys Arg Ala Tyr Arg Glu Leu Arg Leu Leu Lys His
 65 70 75 80

 Met Arg His Glu Asn Val Ile Gly Leu Leu Asp Val Phe Thr Pro Asp
 85 90 95

Glu Thr Leu Asp Asp Phe Thr Asp Phe Tyr Leu Val Met Pro Phe Met
 100 105 110

Gly Thr Asp Leu Gly Lys Leu Met Lys His Glu Lys Leu Gly Glu Asp
 115 120 125

Arg Ile Gln Phe Leu Val Tyr Gln Met Leu Lys Gly Leu Arg Tyr Ile
 130 135 140

His Ala Ala Gly Ile Ile His Arg Asp Leu Lys Pro Gly Asn Leu Ala
 145 150 155 160

Val Asn Glu Asp Cys Glu Leu Lys Ile Leu Asp Phe Gly Leu Ala Arg
 165 170 175

Gln Ala Asp Ser Glu Met Thr Gly Tyr Val Val Thr Arg Trp Tyr Arg
 180 185 190

Ala Pro Glu Val Ile Leu Asn Trp Met Arg Tyr Thr Gln Thr Val Asp
 195 200 205

Ile Trp Ser Val Gly Cys Ile Met Ala Glu Met Ile Thr Gly Lys Thr
 210 215 220

Leu Phe Lys Gly Ser Asp His Leu Asp Gln Leu Lys Glu Ile Met Lys
 225 230 235 240

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

Glu Ala Lys Asn Tyr Met Lys Gly Leu Pro Glu Leu Glu Lys Lys Asp
 260 265 270

Phe Ala Ser Ile Leu Thr Asn Ala Ser Pro Leu Ala Val Asn Leu Leu
 275 280 285

Glu Lys Met Leu Val Leu Asp Ala Glu Gln Arg Val Thr Ala Gly Glu
 290 295 300

Ala Leu Ala His Pro Tyr Phe Glu Ser Leu His Asp Thr Glu Asp Glu
 305 310 315 320

Pro Gln Val Gln Lys Tyr Asp Asp Ser Phe Asp Asp Val Asp Arg Thr
 325 330 335

Leu Asp Glu Trp Lys Arg Val Thr Tyr Lys Glu Val Leu Ser Phe Lys
 340 345 350

Pro Pro Arg Gln Leu Gly Ala Arg Val Ser Lys Glu Thr Pro Leu
 355 360 365

<210> 18
 <211> 469
 <212> PRT
 <213> Homo sapiens

<400> 18

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

Ser His Ser Phe Pro Ala Thr Leu Glu Thr Gln Glu Gln Asp Val Asp
 20 25 30

Leu Val Gln Lys Tyr Leu Glu Lys Tyr Tyr Asn Leu Lys Asn Asp Gly
 35 40 45

Arg Gln Val Glu Lys Arg Arg Asn Ser Gly Pro Val Val Glu Lys Leu
 50 55 60

Lys Gln Met Gln Glu Phe Phe Gly Leu Lys Val Thr Gly Lys Pro Asp
 65 70 75 80

Ala Glu Thr Leu Lys Val Met Lys Gln Pro Arg Cys Gly Val Pro Asp
 85 90 95

Val Ala Gln Phe Val Leu Thr Glu Gly Asn Pro Arg Trp Glu Gln Thr
 100 105 110

His Leu Thr Tyr Arg Ile Glu Asn Tyr Thr Pro Asp Leu Pro Arg Ala
 115 120 125

Asp Val Asp His Ala Ile Glu Lys Ala Phe Gln Leu Trp Ser Asn Val
 130 135 140

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

Ile Ser Phe Val Arg Gly Asp His Arg Asp Asn Ser Pro Phe Asp Gly
 165 170 175

Pro Gly Gly Asn Leu Ala His Ala Phe Gln Pro Gly Pro Gly Ile Gly
 180 185 190

Gly Asp Ala His Phe Asp Glu Asp Glu Arg Trp Thr Asn Asn Phe Arg
 195 200 205

Glu Tyr Asn Leu His Arg Val Ala Ala His Glu Leu Gly His Ser Leu
 210 215 220

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

<210> 19
 <211> 267
 <212> PRT
 <213> Homo sapiens

<400> 19

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

Ala Leu Pro Leu Pro Gln Glu Ala Gly Gly Met Ser Glu Leu Gln Trp
 20 25 30

Glu Gln Ala Gln Asp Tyr Leu Lys Arg Phe Tyr Leu Tyr Asp Ser Glu
 35 40 45

Thr Lys Asn Ala Asn Ser Leu Glu Ala Lys Leu Lys Glu Met Gln Lys
 50 55 60

Phe Phe Gly Leu Pro Ile Thr Gly Met Leu Asn Ser Arg Val Ile Glu
 65 70 75 80

Ile Met Gln Lys Pro Arg Cys Gly Val Pro Asp Val Ala Glu Tyr Ser
 85 90 95

Leu Phe Pro Asn Ser Pro Lys Trp Thr Ser Lys Val Val Thr Tyr Arg
 100 105 110

Ile Val Ser Tyr Thr Arg Asp Leu Pro His Ile Thr Val Asp Arg Leu
 115 120 125

Val Ser Lys Ala Leu Asn Met Trp Gly Lys Glu Ile Pro Leu His Phe
 130 135 140

Arg Lys Val Val Trp Gly Thr Ala Asp Ile Met Ile Gly Phe Ala Arg
 145 150 155 160

Gly Ala His Gly Asp Ser Tyr Pro Phe Asp Gly Pro Gly Asn Thr Leu
 165 170 175

Ala His Ala Phe Ala Pro Gly Thr Gly Leu Gly Gly Asp Ala His Phe
 180 185 190

Asp Glu Asp Glu Arg Trp Thr Asp Gly Ser Ser Leu Gly Ile Asn Phe
 195 200 205

Leu Tyr Ala Ala Thr His Glu Leu Gly His Ser Leu Gly Met Gly His
 210 215 220

Ser Ser Asp Pro Asn Ala Val Met Tyr Pro Thr Tyr Gly Asn Gly Asp

225 230 235 240
 Pro Gln Asn Phe Lys Leu Ser Gln Asp Asp Ile Lys Gly Ile Gln Lys
 245 250 255
 Leu Tyr Gly Lys Arg Ser Asn Ser Arg Lys Lys
 260 265

 <210> 20
 <211> 5703
 <212> PRT
 <213> Homo sapiens

 <400> 20

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

 Met Leu Val Val Pro Gln Ala Glu Thr Gln Gly Pro Val Glu Pro Ser
 20 25 30

 Trp Gly Asn Ala Gly His Thr Met Asp Gly Gly Ala Pro Thr Ser Ser
 35 40 45

 Pro Thr Arg Arg Val Ser Phe Val Pro Pro Val Thr Val Phe Pro Ser
 50 55 60

 Leu Ser Pro Leu Asn Pro Ala His Asn Gly Arg Val Cys Ser Thr Trp
 65 70 75 80

 Gly Asp Phe His Tyr Lys Thr Phe Asp Gly Asp Val Phe Arg Phe Pro
 85 90 95

 Gly Leu Cys Asn Tyr Val Phe Ser Glu His Cys Arg Ala Ala Tyr Glu
 100 105 110

 Asp Phe Asn Val Gln Leu Arg Arg Gly Leu Val Gly Ser Arg Pro Val
 115 120 125

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

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

 Arg Thr Gly Leu Leu Val Glu Gln Ser Gly Asp Tyr Ile Lys Val Ser
 165 170 175

 Ile Arg Leu Val Leu Thr Phe Leu Trp Asn Gly Glu Asp Ser Ala Leu
 180 185 190

Leu Glu Leu Asp Pro Lys Tyr Ala Asn Gln Thr Cys Gly Leu Cys Gly
 195 200 205

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

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

Thr Glu Gln Cys Pro Asp Pro Leu Pro Leu Pro Ala Gly Asn Cys Thr
 245 250 255

Asp Glu Glu Gly Ile Cys His Arg Thr Leu Leu Gly Pro Ala Phe Ala
 260 265 270

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

Gln Asp Leu Cys Arg Cys Pro Thr Cys Pro Cys Ala Thr Phe Val Glu
 290 295 300

Tyr Ser Arg Gln Cys Ala His Ala Gly Gly Gln Pro Arg Asn Trp Arg
 305 310 315 320

Cys Pro Glu Leu Cys Pro Arg Thr Cys Pro Leu Asn Met Gln His Gln
 325 330 335

Glu Cys Gly Ser Pro Cys Thr Asp Thr Cys Ser Asn Pro Gln Arg Ala
 340 345 350

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

Ser Thr Val Leu Asp Asp Ile Thr His Ser Gly Cys Leu Pro Leu Gly
 370 375 380

Gln Cys Pro Cys Thr His Gly Gly Arg Thr Tyr Ser Pro Gly Thr Ser
 385 390 395 400

Phe Asn Thr Thr Cys Ser Ser Cys Thr Cys Ser Gly Gly Leu Trp Gln
 405 410 415

Cys Gln Asp Leu Pro Cys Pro Gly Thr Cys Ser Val Gln Gly Gly Ala
 420 425 430

His Ile Ser Thr Tyr Asp Glu Lys Leu Tyr Asp Leu His Gly Asp Cys
 435 440 445

Ser Tyr Val Leu Ser Lys Lys Cys Ala Asp Ser Ser Phe Thr Val Leu
450 455 460

Ala Glu Leu Arg Lys Cys Gly Leu Thr Asp Asn Glu Asn Cys Leu Lys
465 470 475 480

Ala Val Thr Leu Ser Leu Asp Gly Gly Asp Thr Ala Ile Arg Val Gln
485 490 495

Ala Asp Gly Gly Val Phe Leu Asn Ser Ile Tyr Thr Gln Leu Pro Leu
500 505 510

Ser Ala Ala Asn Ile Thr Leu Phe Thr Pro Ser Ser Phe Phe Ile Val
515 520 525

Val Gln Thr Gly Leu Gly Leu Gln Leu Leu Val Gln Leu Val Pro Leu
530 535 540

Met Gln Val Phe Val Arg Leu Asp Pro Ala His Gln Gly Gln Met Cys
545 550 555 560

Gly Leu Cys Gly Asn Phe Asn Gln Asn Gln Ala Asp Asp Phe Thr Ala
565 570 575

Leu Ser Gly Val Val Glu Ala Thr Gly Ala Ala Phe Ala Asn Thr Trp
580 585 590

Lys Ala Gln Ala Ala Cys Ala Asn Ala Arg Asn Ser Phe Glu Asp Pro
595 600 605

Cys Ser Leu Ser Val Glu Asn Glu Asn Tyr Ala Arg His Trp Cys Ser
610 615 620

Arg Leu Thr Asp Pro Asn Ser Ala Phe Ser Arg Cys His Ser Ile Ile
625 630 635 640

Asn Pro Lys Pro Phe His Ser Asn Cys Met Phe Asp Thr Cys Asn Cys
645 650 655

Glu Arg Ser Glu Asp Cys Leu Cys Ala Ala Leu Ser Ser Tyr Val His
660 665 670

Ala Cys Ala Ala Lys Gly Val Gln Leu Ser Asp Trp Arg Asp Gly Val
675 680 685

Cys Thr Lys Tyr Met Gln Asn Cys Pro Lys Ser Gln Arg Tyr Ala Tyr
690 695 700

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

705		710		715		720
Val Thr Cys Ser	Val Ser Phe Val Pro	Val Asp Gly Cys Thr Cys Pro				
	725	730			735	
Ala Gly Thr Phe Leu Asn Asp Ala Gly Ala Cys Val Pro Ala Gln Glu						
	740	745			750	
Cys Pro Cys Tyr Ala His Gly Thr Val Leu Ala Pro Gly Glu Val Val						
	755	760			765	
His Asp Glu Gly Ala Val Cys Ser Cys Thr Gly Gly Lys Leu Ser Cys						
	770	775			780	
Leu Gly Ala Ser Leu Gln Lys Ser Thr Gly Cys Ala Ala Pro Met Val						
	785	790			795	800
Tyr Leu Asp Cys Ser Asn Ser Ser Ala Gly Thr Pro Gly Ala Glu Cys						
	805	810			815	
Leu Arg Ser Cys His Thr Leu Asp Val Gly Cys Phe Ser Thr His Cys						
	820	825			830	
Val Ser Gly Cys Val Cys Pro Pro Gly Leu Val Ser Asp Gly Ser Gly						
	835	840			845	
Gly Cys Ile Ala Glu Glu Asp Cys Pro Cys Val His Asn Glu Ala Thr						
	850	855			860	
Tyr Lys Pro Gly Glu Thr Ile Arg Val Asp Cys Asn Thr Cys Thr Cys						
	865	870			875	880
Arg Asn Arg Arg Trp Glu Cys Ser His Arg Leu Cys Leu Gly Thr Cys						
	885	890			895	
Val Ala Tyr Gly Asp Gly His Phe Ile Thr Phe Asp Gly Asp Arg Tyr						
	900	905			910	
Ser Phe Glu Gly Ser Cys Glu Tyr Ile Leu Ala Gln Asp Tyr Cys Gly						
	915	920			925	
Asp Asn Thr Thr His Gly Thr Phe Arg Ile Val Thr Glu Asn Ile Pro						
	930	935			940	
Cys Gly Thr Thr Gly Thr Thr Cys Ser Lys Ala Ile Lys Leu Phe Val						
	945	950			955	960
Glu Ser Tyr Glu Leu Ile Leu Gln Glu Gly Thr Phe Lys Ala Val Ala						
	965	970			975	

Arg Gly Pro Gly Gly Asp Pro Pro Tyr Lys Ile Arg Tyr Met Gly Ile
 980 985 990

Phe Leu Val Ile Glu Thr His Gly Met Ala Val Ser Trp Asp Arg Lys
 995 1000 1005

Thr Ser Val Phe Ile Arg Leu His Gln Asp Tyr Lys Gly Arg Val
 1010 1015 1020

Cys Gly Leu Cys Gly Asn Phe Asp Asp Asn Ala Ile Asn Asp Phe
 1025 1030 1035

Ala Thr Arg Ser Arg Ser Val Val Gly Asp Ala Leu Glu Phe Gly
 1040 1045 1050

Asn Ser Trp Lys Leu Ser Pro Ser Cys Pro Asp Ala Leu Ala Pro
 1055 1060 1065

Lys Asp Pro Cys Thr Ala Asn Pro Phe Arg Lys Ser Trp Ala Gln
 1070 1075 1080

Lys Gln Cys Ser Ile Leu His Gly Pro Thr Phe Ala Ala Cys Arg
 1085 1090 1095

Ser Gln Val Asp Ser Thr Lys Tyr Tyr Glu Ala Cys Val Asn Asp
 1100 1105 1110

Ala Cys Ala Cys Asp Ser Gly Gly Asp Cys Glu Cys Phe Cys Thr
 1115 1120 1125

Ala Val Ala Ala Tyr Ala Gln Ala Cys His Asp Ala Gly Leu Cys
 1130 1135 1140

Val Ser Trp Arg Thr Pro Asp Thr Cys Pro Leu Phe Cys Asp Phe
 1145 1150 1155

Tyr Asn Pro His Gly Gly Cys Glu Trp His Tyr Gln Pro Cys Gly
 1160 1165 1170

Ala Pro Cys Leu Lys Thr Cys Arg Asn Pro Ser Gly His Cys Leu
 1175 1180 1185

Val Asp Leu Pro Gly Leu Glu Gly Cys Tyr Pro Lys Cys Pro Pro
 1190 1195 1200

Ser Gln Pro Phe Phe Asn Glu Asp Gln Met Lys Cys Val Ala Gln
 1205 1210 1215

Cys	Gly	Cys	Tyr	Asp	Lys	Asp	Gly	Asn	Tyr	Tyr	Asp	Val	Gly	Ala
1220						1225					1230			
Arg	Val	Pro	Thr	Ala	Glu	Asn	Cys	Gln	Ser	Cys	Asn	Cys	Thr	Pro
1235						1240					1245			
Ser	Gly	Ile	Gln	Cys	Ala	His	Ser	Leu	Glu	Ala	Cys	Thr	Cys	Thr
1250						1255					1260			
Tyr	Glu	Asp	Arg	Thr	Tyr	Ser	Tyr	Gln	Asp	Val	Ile	Tyr	Asn	Thr
1265						1270					1275			
Thr	Asp	Gly	Leu	Gly	Ala	Cys	Leu	Ile	Ala	Ile	Cys	Gly	Ser	Asn
1280						1285					1290			
Gly	Thr	Ile	Ile	Arg	Lys	Ala	Val	Ala	Cys	Pro	Gly	Thr	Pro	Ala
1295						1300					1305			
Thr	Thr	Pro	Phe	Thr	Phe	Thr	Thr	Ala	Trp	Val	Pro	His	Ser	Thr
1310						1315					1320			
Thr	Ser	Pro	Ala	Leu	Pro	Val	Ser	Thr	Val	Cys	Val	Arg	Glu	Val
1325						1330					1335			
Cys	Arg	Trp	Ser	Ser	Trp	Tyr	Asn	Gly	His	Arg	Pro	Glu	Pro	Gly
1340						1345					1350			
Leu	Gly	Gly	Gly	Asp	Phe	Glu	Thr	Phe	Glu	Asn	Leu	Arg	Gln	Arg
1355						1360					1365			
Gly	Tyr	Gln	Val	Cys	Pro	Val	Leu	Ala	Asp	Ile	Glu	Cys	Arg	Ala
1370						1375					1380			
Ala	Gln	Leu	Pro	Asp	Met	Pro	Leu	Glu	Glu	Leu	Gly	Gln	Gln	Val
1385						1390					1395			
Asp	Cys	Asp	Arg	Met	Arg	Gly	Leu	Met	Cys	Ala	Asn	Ser	Gln	Gln
1400						1405					1410			
Ser	Pro	Pro	Leu	Cys	His	Asp	Tyr	Glu	Leu	Arg	Val	Leu	Cys	Cys
1415						1420					1425			
Glu	Tyr	Val	Pro	Cys	Gly	Pro	Ser	Pro	Ala	Pro	Gly	Thr	Ser	Pro
1430						1435					1440			
Gln	Pro	Ser	Leu	Ser	Ala	Ser	Thr	Glu	Pro	Ala	Val	Pro	Thr	Pro
1445						1450					1455			

Thr	Gln	Thr	Thr	Ala	Thr	Glu	Lys	Thr	Thr	Leu	Trp	Val	Thr	Pro
1460						1465					1470			
Ser	Ile	Arg	Ser	Thr	Ala	Ala	Leu	Thr	Ser	Gln	Thr	Gly	Ser	Ser
1475						1480					1485			
Ser	Gly	Pro	Val	Thr	Val	Thr	Pro	Ser	Ala	Pro	Gly	Thr	Thr	Thr
1490						1495					1500			
Cys	Gln	Pro	Arg	Cys	Gln	Trp	Thr	Glu	Trp	Phe	Asp	Glu	Asp	Tyr
1505						1510					1515			
Pro	Lys	Ser	Glu	Gln	Leu	Gly	Gly	Asp	Val	Glu	Ser	Tyr	Asp	Lys
1520						1525					1530			
Ile	Arg	Ala	Ala	Gly	Gly	His	Leu	Cys	Gln	Gln	Pro	Lys	Asp	Ile
1535						1540					1545			
Glu	Cys	Gln	Ala	Glu	Ser	Phe	Pro	Asn	Trp	Thr	Leu	Ala	Gln	Val
1550						1555					1560			
Gly	Gln	Lys	Val	His	Cys	Asp	Val	His	Phe	Gly	Leu	Val	Cys	Arg
1565						1570					1575			
Asn	Trp	Glu	Gln	Glu	Gly	Val	Phe	Lys	Met	Cys	Tyr	Asn	Tyr	Arg
1580						1585					1590			
Ile	Arg	Val	Leu	Cys	Cys	Ser	Asp	Asp	His	Cys	Arg	Gly	Arg	Ala
1595						1600					1605			
Thr	Thr	Pro	Pro	Pro	Thr	Thr	Glu	Leu	Glu	Thr	Ala	Thr	Thr	Thr
1610						1615					1620			
Thr	Thr	Gln	Ala	Leu	Phe	Ser	Thr	Pro	Gln	Pro	Thr	Ser	Ser	Pro
1625						1630					1635			
Gly	Leu	Thr	Arg	Ala	Pro	Pro	Ala	Ser	Thr	Thr	Ala	Val	Pro	Thr
1640						1645					1650			
Leu	Ser	Glu	Gly	Leu	Thr	Ser	Pro	Arg	Tyr	Thr	Ser	Thr	Leu	Gly
1655						1660					1665			
Thr	Ala	Thr	Thr	Gly	Gly	Pro	Arg	Gln	Ser	Ala	Gly	Ser	Thr	Glu
1670						1675					1680			
Pro	Thr	Val	Pro	Gly	Val	Ala	Thr	Ser	Thr	Leu	Pro	Thr	Arg	Ser
1685						1690					1695			
Ala	Leu	Pro	Gly	Thr	Thr	Gly	Ser	Leu	Gly	Thr	Trp	Arg	Pro	Ser

1700						1705					1710			
Gln	Pro	Pro	Thr	Leu	Ala	Pro	Thr	Thr	Met	Ala	Thr	Ser	Arg	Ala
1715						1720					1725			
Arg	Pro	Thr	Gly	Thr	Ala	Ser	Thr	Ala	Ser	Lys	Glu	Pro	Leu	Thr
1730						1735					1740			
Thr	Ser	Leu	Ala	Pro	Thr	Leu	Thr	Ser	Glu	Leu	Ser	Thr	Ser	Gln
1745						1750					1755			
Ala	Glu	Thr	Ser	Thr	Pro	Arg	Thr	Glu	Thr	Thr	Met	Ser	Pro	Leu
1760						1765					1770			
Thr	Asn	Thr	Thr	Thr	Ser	Gln	Gly	Thr	Thr	Arg	Cys	Gln	Pro	Lys
1775						1780					1785			
Cys	Glu	Trp	Thr	Glu	Trp	Phe	Asp	Val	Asp	Phe	Pro	Thr	Ser	Gly
1790						1795					1800			
Val	Ala	Ser	Gly	Asp	Met	Glu	Thr	Phe	Glu	Asn	Ile	Arg	Ala	Ala
1805						1810					1815			
Gly	Gly	Lys	Met	Cys	Trp	Ala	Pro	Lys	Ser	Ile	Glu	Cys	Arg	Ala
1820						1825					1830			
Glu	Asn	Tyr	Pro	Glu	Val	Ser	Ile	Asp	Gln	Val	Gly	Gln	Val	Leu
1835						1840					1845			
Thr	Cys	Ser	Leu	Glu	Thr	Gly	Leu	Thr	Cys	Lys	Asn	Glu	Asp	Gln
1850						1855					1860			
Thr	Gly	Arg	Phe	Asn	Met	Cys	Phe	Asn	Tyr	Asn	Val	Arg	Val	Leu
1865						1870					1875			
Cys	Cys	Asp	Asp	Tyr	Ser	His	Cys	Pro	Ser	Thr	Leu	Ala	Thr	Ser
1880						1885					1890			
Ser	Thr	Ala	Thr	Pro	Ser	Ser	Thr	Pro	Gly	Thr	Thr	Trp	Ile	Leu
1895						1900					1905			
Thr	Lys	Pro	Thr	Thr	Thr	Ala	Thr	Thr	Thr	Ala	Ser	Thr	Gly	Ser
1910						1915					1920			
Thr	Ala	Thr	Ala	Ser	Ser	Thr	Gln	Ala	Thr	Ala	Gly	Thr	Pro	His
1925						1930					1935			
Val	Ser	Thr	Thr	Ala	Thr	Thr	Pro	Thr	Val	Thr	Ser	Ser	Lys	Ala
1940						1945					1950			

Thr	Pro	Phe	Ser	Ser	Pro	Gly	Thr	Ala	Thr	Ala	Leu	Pro	Ala	Leu
	1955					1960					1965			
Arg	Ser	Thr	Ala	Thr	Thr	Pro	Thr	Ala	Thr	Ser	Phe	Thr	Ala	Ile
	1970					1975					1980			
Pro	Ser	Ser	Ser	Leu	Gly	Thr	Thr	Trp	Thr	Arg	Leu	Ser	Gln	Thr
	1985					1990					1995			
Thr	Thr	Pro	Met	Ala	Thr	Met	Ser	Thr	Ala	Thr	Pro	Ser	Ser	Thr
	2000					2005					2010			
Pro	Glu	Thr	Val	His	Thr	Ser	Thr	Val	Leu	Thr	Thr	Thr	Ala	Thr
	2015					2020					2025			
Thr	Thr	Gly	Ala	Thr	Gly	Ser	Val	Ala	Thr	Pro	Ser	Ser	Thr	Pro
	2030					2035					2040			
Gly	Thr	Ala	His	Thr	Thr	Lys	Val	Leu	Thr	Thr	Thr	Thr	Thr	Gly
	2045					2050					2055			
Phe	Thr	Ala	Thr	Pro	Ser	Ser	Ser	Pro	Gly	Arg	Ala	Arg	Thr	Leu
	2060					2065					2070			
Pro	Val	Trp	Ile	Ser	Thr	Thr	Thr	Thr	Pro	Thr	Thr	Arg	Gly	Ser
	2075					2080					2085			
Thr	Val	Thr	Pro	Ser	Ser	Ile	Pro	Gly	Thr	Thr	His	Thr	Pro	Thr
	2090					2095					2100			
Val	Leu	Thr	Thr	Thr	Thr	Thr	Thr	Val	Ala	Thr	Gly	Ser	Met	Ala
	2105					2110					2115			
Thr	Pro	Ser	Ser	Ser	Thr	Gln	Thr	Ser	Gly	Thr	Pro	Pro	Ser	Leu
	2120					2125					2130			
Thr	Thr	Thr	Ala	Thr	Thr	Ile	Thr	Ala	Thr	Gly	Ser	Thr	Thr	Asn
	2135					2140					2145			
Pro	Ser	Ser	Thr	Pro	Gly	Thr	Thr	Pro	Ile	Pro	Pro	Val	Leu	Thr
	2150					2155					2160			
Thr	Thr	Ala	Thr	Thr	Pro	Ala	Ala	Thr	Ser	Ser	Thr	Val	Thr	Pro
	2165					2170					2175			
Ser	Ser	Ala	Leu	Gly	Thr	Thr	His	Thr	Pro	Pro	Val	Pro	Asn	Thr
	2180					2185					2190			

Thr	Ala	Thr	Thr	His	Gly	Arg	Ser	Leu	Ser	Pro	Ser	Ser	Pro	His
2195						2200					2205			
Thr	Val	Cys	Thr	Ala	Trp	Thr	Ser	Ala	Thr	Ser	Gly	Ile	Leu	Gly
2210						2215					2220			
Thr	Thr	His	Ile	Thr	Glu	Pro	Ser	Thr	Gly	Thr	Ser	His	Thr	Pro
2225						2230					2235			
Ala	Ala	Thr	Thr	Gly	Thr	Thr	Gln	His	Ser	Thr	Pro	Ala	Leu	Ser
2240						2245					2250			
Ser	Pro	His	Pro	Ser	Ser	Arg	Thr	Thr	Glu	Ser	Pro	Pro	Ser	Pro
2255						2260					2265			
Gly	Thr	Thr	Thr	Pro	Gly	His	Thr	Thr	Ala	Thr	Ser	Arg	Thr	Thr
2270						2275					2280			
Ala	Thr	Ala	Thr	Pro	Ser	Lys	Thr	Arg	Thr	Ser	Thr	Leu	Leu	Pro
2285						2290					2295			
Ser	Gln	Pro	Thr	Ser	Ala	Pro	Ile	Thr	Thr	Val	Val	Thr	Met	Gly
2300						2305					2310			
Cys	Glu	Pro	Gln	Cys	Ala	Trp	Ser	Glu	Trp	Leu	Asp	Tyr	Ser	Tyr
2315						2320					2325			
Pro	Met	Pro	Gly	Pro	Ser	Gly	Gly	Asp	Phe	Asp	Thr	Tyr	Ser	Asn
2330						2335					2340			
Ile	Arg	Ala	Ala	Gly	Gly	Ala	Val	Cys	Glu	Gln	Pro	Leu	Gly	Leu
2345						2350					2355			
Glu	Cys	Arg	Ala	Gln	Ala	Gln	Pro	Gly	Val	Pro	Leu	Arg	Glu	Leu
2360						2365					2370			
Gly	Gln	Val	Val	Glu	Cys	Ser	Leu	Asp	Phe	Gly	Leu	Val	Cys	Arg
2375						2380					2385			
Asn	Arg	Glu	Gln	Val	Gly	Lys	Phe	Lys	Met	Cys	Phe	Asn	Tyr	Glu
2390						2395					2400			
Ile	Arg	Val	Phe	Cys	Cys	Asn	Tyr	Gly	His	Cys	Pro	Ser	Thr	Pro
2405						2410					2415			
Ala	Thr	Ser	Ser	Thr	Ala	Thr	Pro	Ser	Ser	Thr	Pro	Gly	Thr	Thr
2420						2425					2430			

Trp	Ile	Leu	Thr	Glu	Leu	Thr	Thr	Thr	Ala	Thr	Thr	Thr	Glu	Ser
2435						2440						2445		
Thr	Gly	Ser	Thr	Ala	Thr	Pro	Thr	Ser	Thr	Leu	Arg	Thr	Ala	Pro
2450						2455					2460			
Pro	Pro	Lys	Val	Leu	Thr	Thr	Thr	Ala	Thr	Thr	Pro	Thr	Val	Thr
2465						2470					2475			
Ser	Ser	Lys	Ala	Thr	Pro	Ser	Ser	Ser	Pro	Gly	Thr	Ala	Thr	Ala
2480						2485					2490			
Leu	Pro	Ala	Leu	Arg	Ser	Thr	Ala	Thr	Thr	Pro	Thr	Ala	Thr	Ser
2495						2500					2505			
Val	Thr	Pro	Ile	Pro	Ser	Ser	Ser	Leu	Gly	Thr	Thr	Trp	Thr	Arg
2510						2515					2520			
Leu	Ser	Gln	Thr	Thr	Thr	Pro	Thr	Ala	Thr	Met	Ser	Thr	Ala	Thr
2525						2530					2535			
Pro	Ser	Ser	Thr	Pro	Glu	Thr	Ala	His	Thr	Ser	Thr	Val	Leu	Thr
2540						2545					2550			
Ala	Thr	Ala	Thr	Thr	Thr	Gly	Ala	Thr	Gly	Ser	Val	Ala	Thr	Pro
2555						2560					2565			
Ser	Ser	Thr	Pro	Gly	Thr	Ala	His	Thr	Thr	Lys	Val	Pro	Thr	Thr
2570						2575					2580			
Thr	Thr	Thr	Gly	Phe	Thr	Ala	Thr	Pro	Ser	Ser	Ser	Pro	Gly	Thr
2585						2590					2595			
Ala	Leu	Thr	Pro	Pro	Val	Trp	Ile	Ser	Thr	Thr	Thr	Thr	Pro	Thr
2600						2605					2610			
Thr	Arg	Gly	Ser	Thr	Val	Thr	Pro	Ser	Ser	Ile	Pro	Gly	Thr	Thr
2615						2620					2625			
His	Thr	Ala	Thr	Val	Leu	Thr	Thr	Thr	Thr	Thr	Thr	Val	Ala	Thr
2630						2635					2640			
Gly	Ser	Met	Ala	Thr	Pro	Ser	Ser	Ser	Thr	Gln	Thr	Ser	Gly	Thr
2645						2650					2655			
Pro	Pro	Ser	Leu	Thr	Thr	Thr	Ala	Thr	Thr	Ile	Thr	Ala	Thr	Gly
2660						2665					2670			
Ser	Thr	Thr	Asn	Pro	Ser	Ser	Thr	Pro	Gly	Thr	Arg	Pro	Ile	Pro

2675		2680		2685
Pro Val	Leu Thr Thr Thr	Ala Thr Thr Pro Ala	Ala Thr Ser Ser	
2690		2695	2700	
Thr Val	Thr Pro Ser Ser	Ala Leu Gly Thr Thr	His Thr Pro Pro	
2705		2710	2715	
Val Pro	Asn Thr Thr Ala	Thr Thr His Gly Arg	Ser Leu Ser Pro	
2720		2725	2730	
Ser Ser	Pro His Thr Val	Arg Thr Ala Trp Thr	Ser Ala Thr Ser	
2735		2740	2745	
Gly Thr	Leu Gly Thr Thr	His Ile Thr Glu Pro	Ser Thr Gly Thr	
2750		2755	2760	
Ser His	Thr Pro Ala Ala	Thr Thr Gly Thr Thr	Gln His Ser Thr	
2765		2770	2775	
Pro Ala	Leu Ser Ser Pro	His Pro Ser Ser Arg	Thr Thr Glu Ser	
2780		2785	2790	
Pro Pro	Ser Pro Gly Thr	Thr Thr Pro Gly His	Thr Thr Ala Thr	
2795		2800	2805	
Ser Arg	Thr Thr Ala Thr	Ala Thr Pro Ser Lys	Thr Arg Thr Ser	
2810		2815	2820	
Thr Leu	Leu Pro Ser Ser	Pro Thr Ser Ala Pro	Ile Thr Thr Val	
2825		2830	2835	
Val Thr	Met Gly Cys Glu	Pro Gln Cys Ala Trp	Ser Glu Trp Leu	
2840		2845	2850	
Asp Tyr	Ser Tyr Pro Met	Pro Gly Pro Ser Gly	Gly Asp Phe Asp	
2855		2860	2865	
Thr Tyr	Ser Asn Ile Arg	Ala Ala Gly Gly Ala	Val Cys Glu Gln	
2870		2875	2880	
Pro Leu	Gly Leu Glu Cys	Arg Ala Gln Ala Gln	Pro Gly Val Pro	
2885		2890	2895	
Leu Arg	Glu Leu Gly Gln	Val Val Glu Cys Ser	Leu Asp Phe Gly	
2900		2905	2910	
Leu Val	Cys Arg Asn Arg	Glu Gln Val Gly Lys	Phe Lys Met Cys	
2915		2920	2925	

Phe	Asn	Tyr	Glu	Ile	Arg	Val	Phe	Cys	Cys	Asn	Tyr	Gly	His	Cys
2930						2935					2940			
Pro	Ser	Thr	Pro	Ala	Thr	Ser	Ser	Thr	Ala	Thr	Pro	Ser	Ser	Thr
2945						2950					2955			
Pro	Gly	Thr	Thr	Trp	Ile	Leu	Thr	Glu	Gln	Thr	Thr	Ala	Ala	Thr
2960						2965					2970			
Thr	Thr	Ala	Thr	Thr	Gly	Ser	Thr	Ala	Ile	Pro	Ser	Ser	Thr	Pro
2975						2980					2985			
Gly	Thr	Ala	Pro	Pro	Pro	Lys	Val	Leu	Thr	Ser	Gln	Ala	Thr	Thr
2990						2995					3000			
Pro	Thr	Ala	Thr	Ser	Ser	Lys	Ala	Thr	Ser	Ser	Ser	Ser	Pro	Arg
3005						3010					3015			
Thr	Ala	Thr	Thr	Leu	Pro	Val	Leu	Thr	Ser	Thr	Ala	Thr	Lys	Ser
3020						3025					3030			
Thr	Ala	Thr	Ser	Phe	Thr	Pro	Ile	Pro	Ser	Ser	Thr	Leu	Gly	Thr
3035						3040					3045			
Thr	Gly	Thr	Ser	Gln	Asn	Arg	Pro	Pro	His	Pro	Met	Ala	Thr	Met
3050						3055					3060			
Ser	Thr	Ile	His	Pro	Ser	Ser	Thr	Pro	Glu	Thr	Thr	His	Thr	Ser
3065						3070					3075			
Thr	Val	Leu	Thr	Thr	Lys	Ala	Thr	Thr	Thr	Arg	Ala	Thr	Ser	Ser
3080						3085					3090			
Met	Ser	Thr	Pro	Ser	Ser	Thr	Pro	Gly	Thr	Thr	Trp	Ile	Leu	Thr
3095						3100					3105			
Glu	Leu	Thr	Thr	Ala	Ala	Thr	Thr	Thr	Ala	Ala	Leu	Pro	His	Gly
3110						3115					3120			
Thr	Pro	Ser	Ser	Thr	Pro	Gly	Thr	Thr	Trp	Ile	Leu	Thr	Glu	Pro
3125						3130					3135			
Ser	Thr	Thr	Ala	Thr	Val	Thr	Val	Pro	Thr	Gly	Ser	Thr	Ala	Thr
3140						3145					3150			
Ala	Ser	Ser	Thr	Arg	Ala	Thr	Ala	Gly	Thr	Leu	Lys	Val	Leu	Thr
3155						3160					3165			

Ser	Thr	Ala	Thr	Thr	Pro	Thr	Val	Ile	Ser	Ser	Arg	Ala	Thr	Pro
3170						3175					3180			
Ser	Ser	Ser	Pro	Gly	Thr	Ala	Thr	Ala	Leu	Pro	Ala	Leu	Arg	Ser
3185						3190					3195			
Thr	Ala	Thr	Thr	Pro	Thr	Ala	Thr	Ser	Val	Thr	Ala	Ile	Pro	Ser
3200						3205					3210			
Ser	Ser	Leu	Gly	Thr	Ala	Trp	Thr	Arg	Leu	Ser	Gln	Thr	Thr	Thr
3215						3220					3225			
Pro	Thr	Ala	Thr	Met	Ser	Thr	Ala	Thr	Pro	Ser	Ser	Thr	Pro	Glu
3230						3235					3240			
Thr	Val	His	Thr	Ser	Thr	Val	Leu	Thr	Thr	Thr	Ala	Thr	Thr	Thr
3245						3250					3255			
Arg	Thr	Gly	Ser	Val	Ala	Thr	Pro	Ser	Ser	Thr	Pro	Gly	Thr	Ala
3260						3265					3270			
His	Thr	Thr	Lys	Val	Pro	Thr	Thr	Thr	Thr	Thr	Gly	Phe	Thr	Ala
3275						3280					3285			
Thr	Pro	Ser	Ser	Ser	Pro	Gly	Thr	Ala	Leu	Thr	Pro	Pro	Val	Trp
3290						3295					3300			
Ile	Ser	Thr	Thr	Thr	Thr	Pro	Thr	Thr	Arg	Gly	Ser	Thr	Val	Thr
3305						3310					3315			
Pro	Ser	Ser	Ile	Pro	Gly	Thr	Thr	His	Thr	Ala	Thr	Val	Leu	Thr
3320						3325					3330			
Thr	Thr	Thr	Thr	Thr	Val	Ala	Thr	Gly	Ser	Met	Ala	Thr	Pro	Ser
3335						3340					3345			
Ser	Ser	Thr	Gln	Thr	Ser	Gly	Thr	Pro	Pro	Ser	Leu	Thr	Thr	Thr
3350						3355					3360			
Ala	Thr	Thr	Ile	Thr	Ala	Thr	Gly	Ser	Thr	Thr	Asn	Pro	Ser	Ser
3365						3370					3375			
Thr	Pro	Gly	Thr	Thr	Pro	Ile	Pro	Pro	Val	Leu	Thr	Thr	Thr	Ala
3380						3385					3390			
Thr	Thr	Pro	Ala	Ala	Thr	Ser	Ser	Thr	Val	Thr	Pro	Ser	Ser	Ala
3395						3400					3405			

Leu Gly Thr Thr His Thr Pro Pro Val Pro Asn Thr Thr Ala Thr
 3410 3415 3420
 Thr His Gly Arg Ser Leu Pro Pro Ser Ser Pro His Thr Val Pro
 3425 3430 3435
 Thr Ala Trp Thr Ser Ala Thr Ser Gly Ile Leu Gly Thr Thr His
 3440 3445 3450
 Ile Thr Glu Pro Ser Thr Gly Thr Ser His Thr Pro Ala Ala Thr
 3455 3460 3465
 Thr Gly Thr Thr Gln Pro Ser Thr Pro Ala Leu Ser Ser Pro His
 3470 3475 3480
 Pro Ser Ser Arg Thr Thr Glu Ser Pro Pro Ser Pro Gly Thr Thr
 3485 3490 3495
 Thr Pro Gly His Thr Arg Gly Thr Ser Arg Thr Thr Ala Thr Ala
 3500 3505 3510
 Thr Pro Ser Lys Thr Arg Thr Ser Thr Leu Leu Pro Ser Ser Pro
 3515 3520 3525
 Thr Ser Ala Pro Ile Thr Thr Val Val Thr Thr Gly Cys Glu Pro
 3530 3535 3540
 Gln Cys Ala Trp Ser Glu Trp Leu Asp Tyr Ser Tyr Pro Met Pro
 3545 3550 3555
 Gly Pro Ser Gly Gly Asp Phe Asp Thr Tyr Ser Asn Ile Arg Ala
 3560 3565 3570
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 Ala Gln Ala Gln Pro Gly Val Pro Leu Arg Glu Leu Gly Gln Val
 3590 3595 3600
 Val Glu Cys Ser Leu Asp Phe Gly Leu Val Cys Arg Asn Arg Glu
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 Gln Val Gly Lys Phe Lys Met Cys Phe Asn Tyr Glu Ile Arg Val
 3620 3625 3630
 Phe Cys Cys Asn Tyr Gly His Cys Pro Ser Thr Pro Ala Thr Ser
 3635 3640 3645
 Ser Thr Ala Thr Pro Ser Ser Thr Pro Gly Thr Thr Trp Ile Leu

3650						3655					3660			
Thr	Lys	Leu	Thr	Thr	Thr	Ala	Thr	Thr	Thr	Glu	Ser	Thr	Gly	Ser
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3680						3685					3690			
His	Val	Ser	Thr	Thr	Ala	Thr	Thr	Pro	Thr	Val	Thr	Ser	Ser	Lys
3695						3700					3705			
Ala	Thr	Pro	Phe	Ser	Ser	Pro	Gly	Thr	Ala	Thr	Ala	Leu	Pro	Ala
3710						3715					3720			
Leu	Arg	Ser	Thr	Ala	Thr	Thr	Pro	Thr	Ala	Thr	Ser	Phe	Thr	Ala
3725						3730					3735			
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3740						3745					3750			
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3785						3790					3795			
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3815						3820					3825			
Pro	Pro	Val	Trp	Ile	Ser	Thr	Thr	Thr	Thr	Pro	Thr	Thr	Ser	Gly
3830						3835					3840			
Ser	Thr	Val	Thr	Pro	Ser	Ser	Ile	Pro	Gly	Thr	Thr	His	Thr	Pro
3845						3850					3855			
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Tyr	Pro	Met	Pro	Gly	Pro	Ser	Gly	Gly	Asp	Phe	Asp	Thr	Tyr	Ser
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Arg	Asn	Arg	Glu	Gln	Val	Gly	Lys	Phe	Lys	Met	Cys	Phe	Asn	Tyr
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Glu	Ile	Arg	Val	Phe	Cys	Cys	Asn	Tyr	Gly	His	Cys	Pro	Ser	Thr
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 Gln Ala Thr Ala Gly Thr Pro His Val Ser Thr Thr Ala Thr Thr
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 Pro Thr Val Thr Ser Ser Lys Ala Thr Pro Ser Ser Ser Pro Gly
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 Ser Ser Ser Thr Gln Thr Ser Gly Thr Pro Pro Ser Leu Thr Thr
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 Thr Ala Thr Thr Ile Thr Ala Thr Gly Ser Thr Thr Asn Pro Ser

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Met 5330	Ala	Glu	Gly	Cys	Phe	Cys 5335	Pro	Glu	Asp	Gln	Ile 5340	Leu	Phe	Asn
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His Cys Pro Asn Gly Ser Ala Ile Leu His Thr Tyr Thr His Val				
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Glu Tyr Asn Ala Gln Ile Asn Ser Asn Leu Phe Met Ser Leu Asn Lys
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Asp Gly Ser Tyr Thr Gly Phe Ile Lys Val Gln Leu Lys Leu Val Arg
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Pro Val Ser Val Pro Ser Ser Lys Lys Pro Pro Ser Leu Gln Asp Ala
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Arg Arg Gly Pro Gly Arg Gly Thr Ser Val Arg Arg Arg Thr Ser Phe
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Tyr Leu Pro Lys Asp Ala Val Lys His Leu His Val Leu Ser Arg Thr
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Asp Asp Pro Arg Lys Phe Ala Leu Phe Glu Arg Ala Glu Arg His Gly
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Gln Val Tyr Leu Arg Lys Leu Leu Asp Asp Glu Gln Pro Leu Arg Leu
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Tyr Ile Phe Ala Asp Ala Tyr Ala Gln Tyr Leu Trp Ile Thr Phe Asp
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Leu Leu Leu His Ser Lys Ala Ser Asn Leu Leu Leu Gly Phe Asp Arg
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Ser His Pro Asn Lys Gln Leu Trp Lys Ser Asp Asp Phe Gly Gln Thr
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Trp Ile Met Ile Gln Glu His Val Lys Ser Phe Ser Trp Gly Ile Asp
245 250 255

Pro Tyr Asp Lys Pro Asn Thr Ile Tyr Ile Glu Arg His Glu Pro Ser
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Gly Tyr Ser Thr Val Phe Arg Ser Thr Asp Phe Phe Gln Ser Arg Glu
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Asn Gln Glu Val Ile Leu Glu Glu Val Arg Asp Phe Gln Leu Arg Asp
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Lys Tyr Met Phe Ala Thr Lys Val Val His Leu Leu Gly Ser Glu Gln
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Asp Ala Ser Glu Asp Gln Val Phe Val Cys Val Ser His Ser Asn Asn
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Arg Thr Asn Leu Tyr Ile Ser Glu Ala Glu Gly Leu Lys Phe Ser Leu
370 375 380

Ser Leu Glu Asn Val Leu Tyr Tyr Ser Pro Gly Gly Ala Gly Ser Asp
385 390 395 400

Thr Leu Val Arg Tyr Phe Ala Asn Glu Pro Phe Ala Asp Phe His Arg
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Val Glu Gly Leu Gln Gly Val Tyr Ile Ala Thr Leu Ile Asn Gly Ser
420 425 430

Met Asn Glu Glu Asn Met Arg Ser Val Ile Thr Phe Asp Lys Gly Gly
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Thr Trp Glu Phe Leu Gln Ala Pro Ala Phe Thr Gly Tyr Gly Glu Lys
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Ile Asn Cys Glu Leu Ser Gln Gly Cys Ser Leu His Leu Ala Gln Arg
465 470 475 480

Leu Ser Gln Leu Leu Asn Leu Gln Leu Arg Arg Met Pro Ile Leu Ser
485 490 495

Lys Glu Ser Ala Pro Gly Leu Ile Ile Ala Thr Gly Ser Val Gly Lys
500 505 510

Asn Leu Ala Ser Lys Thr Asn Val Tyr Ile Ser Ser Ser Ala Gly Ala
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Arg Trp Arg Glu Ala Leu Pro Gly Pro His Tyr Tyr Thr Trp Gly Asp
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Leu Lys Tyr Ser Thr Asn Glu Gly Glu Thr Trp Lys Thr Phe Ile Phe
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Ser Glu Lys Pro Val Phe Val Tyr Gly Leu Leu Thr Glu Pro Gly Glu
580 585 590

Lys Ser Thr Val Phe Thr Ile Phe Gly Ser Asn Lys Glu Asn Val His
595 600 605

Ser Trp Leu Ile Leu Gln Val Asn Ala Thr Asp Ala Leu Gly Val Pro
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Cys Thr Glu Asn Asp Tyr Lys Leu Trp Ser Pro Ser Asp Glu Arg Gly
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Asn Glu Cys Leu Leu Gly His Lys Thr Val Phe Lys Arg Arg Thr Pro
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His Ala Thr Cys Phe Asn Gly Glu Asp Phe Asp Arg Pro Val Val Val

660

665

670

Ser Asn Cys Ser Cys Thr Arg Glu Asp Tyr Glu Cys Asp Phe Gly Phe
675 680 685

Lys Met Ser Glu Asp Leu Ser Leu Glu Val Cys Val Pro Asp Pro Glu
690 695 700

Phe Ser Gly Lys Ser Tyr Ser Pro Pro Val Pro Cys Pro Val Gly Ser
705 710 715 720

Thr Tyr Arg Arg Thr Arg Gly Tyr Arg Lys Ile Ser Gly Asp Thr Cys
725 730 735

Ser Gly Gly Asp Val Glu Ala Arg Leu Glu Gly Glu Leu Val Pro Cys
740 745 750

Pro Leu Ala Glu Glu Asn Glu Phe Ile Leu Tyr Ala Val Arg Lys Ser
755 760 765

Ile Tyr Arg Tyr Asp Leu Ala Ser Gly Ala Thr Glu Gln Leu Pro Leu
770 775 780

Thr Gly Leu Arg Ala Ala Val Ala Leu Asp Phe Asp Tyr Glu His Asn
785 790 795 800

Cys Leu Tyr Trp Ser Asp Leu Ala Leu Asp Val Ile Gln Arg Leu Cys
805 810 815

Leu Asn Gly Ser Thr Gly Gln Glu Val Ile Ile Asn Ser Gly Leu Glu
820 825 830

Thr Val Glu Ala Leu Ala Phe Glu Pro Leu Ser Gln Leu Leu Tyr Trp
835 840 845

Val Asp Ala Gly Phe Lys Lys Ile Glu Val Ala Asn Pro Asp Gly Asp
850 855 860

Phe Arg Leu Thr Ile Val Asn Ser Ser Val Leu Asp Arg Pro Arg Ala
865 870 875 880

Leu Val Leu Val Pro Gln Glu Gly Val Met Phe Trp Thr Asp Trp Gly
885 890 895

Asp Leu Lys Pro Gly Ile Tyr Arg Ser Asn Met Asp Gly Ser Ala Ala
900 905 910

Tyr His Leu Val Ser Glu Asp Val Lys Trp Pro Asn Gly Ile Ser Val
915 920 925

Asp Asp Gln Trp Ile Tyr Trp Thr Asp Ala Tyr Leu Glu Cys Ile Glu
 930 935 940

Arg Ile Thr Phe Ser Gly Gln Gln Arg Ser Val Ile Leu Asp Asn Leu
 945 950 955 960

Pro His Pro Tyr Ala Ile Ala Val Phe Lys Asn Glu Ile Tyr Trp Asp
 965 970 975

Asp Trp Ser Gln Leu Ser Ile Phe Arg Ala Ser Lys Tyr Ser Gly Ser
 980 985 990

Gln Met Glu Ile Leu Ala Asn Gln Leu Thr Gly Leu Met Asp Met Lys
 995 1000 1005

Ile Phe Tyr Lys Gly Lys Asn Thr Gly Ser Asn Ala Cys Val Pro
 1010 1015 1020

Arg Pro Cys Ser Leu Leu Cys Leu Pro Lys Ala Asn Asn Ser Arg
 1025 1030 1035

Ser Cys Arg Cys Pro Glu Asp Val Ser Ser Ser Val Leu Pro Ser
 1040 1045 1050

Gly Asp Leu Met Cys Asp Cys Pro Gln Gly Tyr Gln Leu Lys Asn
 1055 1060 1065

Asn Thr Cys Val Lys Gln Glu Asn Thr Cys Leu Arg Asn Gln Tyr
 1070 1075 1080

Arg Cys Ser Asn Gly Asn Cys Ile Asn Ser Ile Trp Trp Cys Asp
 1085 1090 1095

Phe Asp Asn Asp Cys Gly Asp Met Ser Asp Glu Arg Asn Cys Pro
 1100 1105 1110

Thr Thr Ile Cys Asp Leu Asp Thr Gln Phe Arg Cys Gln Glu Ser
 1115 1120 1125

Gly Thr Cys Ile Pro Leu Ser Tyr Lys Cys Asp Leu Glu Asp Asp
 1130 1135 1140

Cys Gly Asp Asn Ser Asp Glu Ser His Cys Glu Met His Gln Cys
 1145 1150 1155

Arg Ser Asp Glu Tyr Asn Cys Ser Ser Gly Met Cys Ile Arg Ser
 1160 1165 1170

Ser	Trp	Val	Cys	Asp	Gly	Asp	Asn	Asp	Cys	Arg	Asp	Trp	Ser	Asp
1175						1180					1185			
Glu	Ala	Asn	Cys	Thr	Ala	Ile	Tyr	His	Thr	Cys	Glu	Ala	Ser	Asn
1190						1195					1200			
Phe	Gln	Cys	Arg	Asn	Gly	His	Cys	Ile	Pro	Gln	Arg	Trp	Ala	Cys
1205						1210					1215			
Asp	Gly	Asp	Thr	Asp	Cys	Gln	Asp	Gly	Ser	Asp	Glu	Asp	Pro	Val
1220						1225					1230			
Asn	Cys	Glu	Lys	Lys	Cys	Asn	Gly	Phe	Arg	Cys	Pro	Asn	Gly	Thr
1235						1240					1245			
Cys	Ile	Pro	Ser	Ser	Lys	His	Cys	Asp	Gly	Leu	Arg	Asp	Cys	Ser
1250						1255					1260			
Asp	Gly	Ser	Asp	Glu	Gln	His	Cys	Glu	Pro	Leu	Cys	Thr	His	Phe
1265						1270					1275			
Met	Asp	Phe	Val	Cys	Lys	Asn	Arg	Gln	Gln	Cys	Leu	Phe	His	Ser
1280						1285					1290			
Met	Val	Cys	Asp	Gly	Ile	Ile	Gln	Cys	Arg	Asp	Gly	Ser	Asp	Glu
1295						1300					1305			
Asp	Ala	Ala	Phe	Ala	Gly	Cys	Ser	Gln	Asp	Pro	Glu	Phe	His	Lys
1310						1315					1320			
Val	Cys	Asp	Glu	Phe	Gly	Phe	Gln	Cys	Gln	Asn	Gly	Val	Cys	Ile
1325						1330					1335			
Ser	Leu	Ile	Trp	Lys	Cys	Asp	Gly	Met	Asp	Asp	Cys	Gly	Asp	Tyr
1340						1345					1350			
Ser	Asp	Glu	Ala	Asn	Cys	Glu	Asn	Pro	Thr	Glu	Ala	Pro	Asn	Cys
1355						1360					1365			
Ser	Arg	Tyr	Phe	Gln	Phe	Arg	Cys	Glu	Asn	Gly	His	Cys	Ile	Pro
1370						1375					1380			
Asn	Arg	Trp	Lys	Cys	Asp	Arg	Glu	Asn	Asp	Cys	Gly	Asp	Trp	Ser
1385						1390					1395			
Asp	Glu	Lys	Asp	Cys	Gly	Asp	Ser	His	Ile	Leu	Pro	Phe	Ser	Thr
1400						1405					1410			

Pro Gly 1415	Pro Ser Thr Cys 1420	Leu 1425	Pro Asn Tyr Tyr 1430	Arg 1435	Cys Ser Ser 1440
Gly Thr 1430	Cys Val Met Asp 1435	Thr 1440	Trp Val Cys Asp 1445	Gly Tyr Arg Asp 1450	
Cys Ala 1445	Asp Gly Ser Asp 1450	Glu 1455	Glu Ala Cys Pro 1460	Leu 1465	Leu Ala Asn 1470
Val Thr 1460	Ala Ala Ser Thr 1465	Pro 1470	Thr Gln Leu Gly 1475	Arg 1480	Cys Asp Arg 1485
Phe Glu 1475	Phe Glu Cys His 1480	Gln 1485	Pro Lys Thr Cys 1490	Ile 1495	Pro Asn Trp 1500
Lys Arg 1490	Cys Asp Gly His 1495	Gln 1500	Asp Cys Gln Asp 1505	Gly 1510	Arg Asp Glu 1515
Ala Asn 1505	Cys Pro Thr His 1510	Ser 1515	Thr Leu Thr Cys 1520	Met 1525	Ser Arg Glu 1530
Phe Gln 1520	Cys Glu Asp Gly 1525	Glu 1530	Ala Cys Ile Val 1535	Leu 1540	Ser Glu Arg 1545
Cys Asp 1535	Gly Phe Leu Asp 1540	Cys 1545	Ser Asp Glu Ser 1550	Asp 1555	Glu Lys Ala 1560
Cys Ser 1550	Asp Glu Leu Thr 1555	Val 1560	Tyr Lys Val Gln 1565	Asn 1570	Leu Gln Trp 1575
Thr Ala 1565	Asp Phe Ser Gly 1570	Asp 1575	Val Thr Leu Thr 1580	Trp 1585	Met Arg Pro 1590
Lys Lys 1580	Met Pro Ser Ala 1585	Ser 1590	Cys Val Tyr Asn 1595	Val 1600	Tyr Tyr Arg 1605
Val Val 1595	Gly Glu Ser Ile 1600	Trp 1605	Lys Thr Leu Glu 1610	Thr 1615	His Ser Asn 1620
Lys Thr 1610	Asn Thr Val Leu 1615	Lys 1620	Val Leu Lys Pro 1625	Asp 1630	Thr Thr Tyr 1635
Gln Val 1625	Lys Val Gln Val 1630	Gln 1635	Cys Leu Ser Lys 1640	Ala 1645	His Asn Thr 1650
Asn Asp 1640	Phe Val Thr Leu 1645	Arg 1650	Thr Pro Glu Gly 1655	Leu 1660	Pro Asp Ala 1665
Pro Arg 1660	Asn Leu Gln Leu 1665	Ser 1670	Leu Pro Arg Glu 1675	Ala 1680	Glu Gly Val 1685

1655						1660						1665			
Ile Val	Gly His	Trp Ala	Pro	Pro Ile	His Thr	His	Gly Leu	Ile							
1670			1675			1680									
Arg Glu	Tyr Ile	Val Glu	Tyr	Ser Arg	Ser Gly	Ser	Lys Met	Trp							
1685			1690			1695									
Ala Ser	Gln Arg	Ala Ala	Ser	Asn Phe	Thr Glu	Ile	Lys Asn	Leu							
1700			1705			1710									
Leu Val	Asn Thr	Leu Tyr	Thr	Val Arg	Val Ala	Ala	Val Thr	Ser							
1715			1720			1725									
Arg Gly	Ile Gly	Asn Trp	Ser	Asp Ser	Lys Ser	Ile	Thr Thr	Ile							
1730			1735			1740									
Lys Gly	Lys Val	Ile Pro	Pro	Pro Asp	Ile His	Ile	Asp Ser	Tyr							
1745			1750			1755									
Gly Glu	Asn Tyr	Leu Ser	Phe	Thr Leu	Thr Met	Glu	Ser Asp	Ile							
1760			1765			1770									
Lys Val	Asn Gly	Tyr Val	Val	Asn Leu	Phe Trp	Ala	Phe Asp	Thr							
1775			1780			1785									
His Lys	Gln Glu	Arg Arg	Thr	Leu Asn	Phe Arg	Gly	Ser Ile	Leu							
1790			1795			1800									
Ser His	Lys Val	Gly Asn	Leu	Thr Ala	His Thr	Ser	Tyr Glu	Ile							
1805			1810			1815									
Ser Ala	Trp Ala	Lys Thr	Asp	Leu Gly	Asp Ser	Pro	Leu Ala	Phe							
1820			1825			1830									
Glu His	Val Met	Thr Arg	Gly	Val Arg	Pro Pro	Ala	Pro Ser	Leu							
1835			1840			1845									
Lys Ala	Lys Ala	Ile Asn	Gln	Thr Ala	Val Glu	Cys	Thr Trp	Thr							
1850			1855			1860									
Gly Pro	Arg Asn	Val Val	Tyr	Gly Ile	Phe Tyr	Ala	Thr Ser	Phe							
1865			1870			1875									
Leu Asp	Leu Tyr	Arg Asn	Pro	Lys Ser	Leu Thr	Thr	Ser Leu	His							
1880			1885			1890									
Asn Lys	Thr Val	Ile Val	Ser	Lys Asp	Glu Gln	Tyr	Leu Phe	Leu							
1895			1900			1905									

Val	Arg	Val	Val	Val	Pro	Tyr	Gln	Gly	Pro	Ser	Ser	Asp	Tyr	Val
1910						1915					1920			
Val	Val	Lys	Met	Ile	Pro	Asp	Ser	Arg	Leu	Pro	Pro	Arg	His	Leu
1925						1930					1935			
His	Val	Val	His	Thr	Gly	Lys	Thr	Ser	Val	Val	Ile	Lys	Trp	Glu
1940						1945					1950			
Ser	Pro	Tyr	Asp	Ser	Pro	Asp	Gln	Asp	Leu	Leu	Tyr	Ala	Val	Ala
1955						1960					1965			
Val	Lys	Asp	Leu	Ile	Arg	Lys	Thr	Asp	Arg	Ser	Tyr	Lys	Val	Lys
1970						1975					1980			
Ser	Arg	Asn	Ser	Thr	Val	Glu	Tyr	Thr	Leu	Asn	Lys	Leu	Glu	Pro
1985						1990					1995			
Gly	Gly	Lys	Tyr	His	Ile	Ile	Val	Gln	Leu	Gly	Asn	Met	Ser	Lys
2000						2005					2010			
Asp	Ser	Ser	Ile	Lys	Ile	Thr	Thr	Val	Ser	Leu	Ser	Ala	Pro	Asp
2015						2020					2025			
Ala	Leu	Lys	Ile	Ile	Thr	Glu	Asn	Asp	His	Val	Leu	Leu	Phe	Trp
2030						2035					2040			
Lys	Ser	Leu	Ala	Leu	Lys	Glu	Lys	His	Phe	Asn	Glu	Ser	Arg	Gly
2045						2050					2055			
Tyr	Glu	Ile	His	Met	Phe	Asp	Ser	Ala	Met	Asn	Ile	Thr	Ala	Tyr
2060						2065					2070			
Leu	Gly	Asn	Thr	Thr	Asp	Asn	Phe	Phe	Lys	Ile	Ser	Asn	Leu	Lys
2075						2080					2085			
Met	Gly	His	Asn	Tyr	Thr	Phe	Thr	Val	Gln	Ala	Arg	Cys	Leu	Phe
2090						2095					2100			
Gly	Asn	Gln	Ile	Cys	Gly	Glu	Pro	Ala	Ile	Leu	Leu	Tyr	Asp	Glu
2105						2110					2115			
Leu	Gly	Ser	Gly	Ala	Asp	Ala	Ser	Ala	Thr	Gln	Ala	Ala	Arg	Ser
2120						2125					2130			
Thr	Asp	Val	Ala	Ala	Val	Val	Val	Pro	Ile	Leu	Phe	Leu	Ile	Leu
2135						2140					2145			

Leu Ser Leu Gly Val Gly Phe Ala Ile Leu Tyr Thr Lys His Arg
2150 2155 2160

Arg Leu Gln Ser Ser Phe Thr Ala Phe Ala Asn Ser His Tyr Ser
2165 2170 2175

Ser Arg Leu Gly Ser Ala Ile Phe Ser Ser Gly Asp Asp Leu Gly
2180 2185 2190

Glu Asp Asp Glu Asp Ala Pro Met Ile Thr Gly Phe Ser Asp Asp
2195 2200 2205

Val Pro Met Val Ile Ala
2210

<210> 24
<211> 222
<212> PRT
<213> Homo sapiens

<400> 24

Met Cys Leu Arg Leu Gly Gly Leu Ser Val Gly Asp Phe Arg Lys Val
1 5 10 15

Leu Met Lys Thr Gly Leu Val Leu Val Val Leu Gly His Val Ser Phe
20 25 30

Ile Thr Ala Ala Leu Phe His Gly Thr Val Leu Arg Tyr Val Gly Thr
35 40 45

Pro Gln Asp Ala Val Ala Leu Gln Tyr Cys Val Val Asn Ile Leu Ser
50 55 60

Val Thr Ser Ala Ile Val Val Ile Thr Ser Gly Ile Ala Ala Ile Val
65 70 75 80

Leu Ser Arg Tyr Leu Pro Ser Thr Pro Leu Arg Trp Thr Val Phe Ser
85 90 95

Ser Ser Val Ala Cys Ala Leu Leu Ser Leu Thr Cys Ala Leu Gly Leu
100 105 110

Leu Ala Ser Ile Ala Met Thr Phe Ala Thr Gln Gly Lys Ala Leu Leu
115 120 125

Ala Ala Cys Thr Phe Gly Ser Ser Glu Leu Leu Ala Leu Ala Pro Asp
130 135 140

Cys Pro Phe Asp Pro Thr Arg Ile Tyr Ser Ser Ser Leu Cys Leu Trp

145 150 155 160
 Gly Ile Ala Leu Val Leu Cys Val Ala Glu Asn Val Phe Ala Val Arg
 165 170 175
 Cys Ala Gln Leu Thr His Gln Leu Leu Glu Leu Arg Pro Trp Trp Gly
 180 185 190
 Lys Ser Ser His His Met Met Arg Glu Asn Pro Glu Leu Val Glu Gly
 195 200 205
 Arg Asp Leu Leu Ser Cys Thr Ser Ser Glu Pro Leu Thr Leu
 210 215 220

 <210> 25
 <211> 335
 <212> PRT
 <213> Homo sapiens

 <400> 25
 Met Leu Gly Ile Trp Thr Leu Leu Pro Leu Val Leu Thr Ser Val Ala
 1 5 10 15
 Arg Leu Ser Ser Lys Ser Val Asn Ala Gln Val Thr Asp Ile Asn Ser
 20 25 30
 Lys Gly Leu Glu Leu Arg Lys Thr Val Thr Thr Val Glu Thr Gln Asn
 35 40 45
 Leu Glu Gly Leu His His Asp Gly Gln Phe Cys His Lys Pro Cys Pro
 50 55 60
 Pro Gly Glu Arg Lys Ala Arg Asp Cys Thr Val Asn Gly Asp Glu Pro
 65 70 75 80
 Asp Cys Val Pro Cys Gln Glu Gly Lys Glu Tyr Thr Asp Lys Ala His
 85 90 95
 Phe Ser Ser Lys Cys Arg Arg Cys Arg Leu Cys Asp Glu Gly His Gly
 100 105 110
 Leu Glu Val Glu Ile Asn Cys Thr Arg Thr Gln Asn Thr Lys Cys Arg
 115 120 125
 Cys Lys Pro Asn Phe Phe Cys Asn Ser Thr Val Cys Glu His Cys Asp
 130 135 140
 Pro Cys Thr Lys Cys Glu His Gly Ile Ile Lys Glu Cys Thr Leu Thr
 145 150 155 160

Ser Asn Thr Lys Cys Lys Glu Glu Gly Ser Arg Ser Asn Leu Gly Trp
165 170 175

Leu Cys Leu Leu Leu Leu Pro Ile Pro Leu Ile Val Trp Val Lys Arg
180 185 190

Lys Glu Val Gln Lys Thr Cys Arg Lys His Arg Lys Glu Asn Gln Gly
195 200 205

Ser His Glu Ser Pro Thr Leu Asn Pro Glu Thr Val Ala Ile Asn Leu
210 215 220

Ser Asp Val Asp Leu Ser Lys Tyr Ile Thr Thr Ile Ala Gly Val Met
225 230 235 240

Thr Leu Ser Gln Val Lys Gly Phe Val Arg Lys Asn Gly Val Asn Glu
245 250 255

Ala Lys Ile Asp Glu Ile Lys Asn Asp Asn Val Gln Asp Thr Ala Glu
260 265 270

Gln Lys Val Gln Leu Leu Arg Asn Trp His Gln Leu His Gly Lys Lys
275 280 285

Glu Ala Tyr Asp Thr Leu Ile Lys Asp Leu Lys Lys Ala Asn Leu Cys
290 295 300

Thr Leu Ala Glu Lys Ile Gln Thr Ile Ile Leu Lys Asp Ile Thr Ser
305 310 315 320

Asp Ser Glu Asn Ser Asn Phe Arg Asn Glu Ile Gln Ser Leu Val
325 330 335

<210> 26
<211> 597
<212> PRT
<213> Homo sapiens

<400> 26

Met Glu Ala Glu Pro Pro Leu Tyr Pro Met Ala Gly Ala Ala Gly Pro
1 5 10 15

Gln Gly Asp Glu Asp Leu Leu Gly Val Pro Asp Gly Pro Glu Ala Pro
20 25 30

Leu Asp Glu Leu Val Gly Ala Tyr Pro Asn Tyr Asn Glu Glu Glu Glu
35 40 45

Glu Arg Arg Tyr Tyr Arg Arg Lys Arg Leu Gly Val Leu Lys Asn Val

50

55

60

Leu Ala Ala Ser Ala Gly Gly Met Leu Thr Tyr Gly Val Tyr Leu Gly
65 70 75 80

Leu Leu Gln Met Gln Leu Ile Leu His Tyr Asp Glu Thr Tyr Arg Glu
85 90 95

Val Lys Tyr Gly Asn Met Gly Leu Pro Asp Ile Asp Ser Lys Met Leu
100 105 110

Met Gly Ile Asn Val Thr Pro Ile Ala Ala Leu Leu Tyr Thr Pro Val
115 120 125

Leu Ile Arg Phe Phe Gly Thr Lys Trp Met Met Phe Leu Ala Val Gly
130 135 140

Ile Tyr Ala Leu Phe Val Ser Thr Asn Tyr Trp Glu Arg Tyr Tyr Thr
145 150 155 160

Leu Val Pro Ser Ala Val Ala Leu Gly Met Ala Ile Val Pro Leu Trp
165 170 175

Ala Ser Met Gly Asn Tyr Ile Thr Arg Met Ala Gln Lys Tyr His Glu
180 185 190

Tyr Ser His Tyr Lys Glu Gln Asp Gly Gln Gly Met Lys Gln Arg Pro
195 200 205

Pro Arg Gly Ser His Ala Pro Tyr Leu Leu Val Phe Gln Ala Ile Phe
210 215 220

Tyr Ser Phe Phe His Leu Ser Phe Ala Cys Ala Gln Leu Pro Met Ile
225 230 235 240

Tyr Phe Leu Asn His Tyr Leu Tyr Asp Leu Asn His Thr Leu Tyr Asn
245 250 255

Val Gln Ser Cys Gly Thr Asn Ser His Gly Ile Leu Ser Gly Phe Asn
260 265 270

Lys Thr Val Leu Arg Thr Leu Pro Arg Ser Gly Asn Leu Ile Val Val
275 280 285

Glu Ser Val Leu Met Ala Val Ala Phe Leu Ala Met Leu Leu Val Leu
290 295 300

Gly Leu Cys Gly Ala Ala Tyr Arg Pro Thr Glu Glu Ile Asp Leu Arg
305 310 315 320

Ser Val Gly Trp Gly Asn Ile Phe Gln Leu Pro Phe Lys His Val Arg
 325 330 335

Asp Tyr Arg Leu Arg His Leu Val Pro Phe Phe Ile Tyr Ser Gly Phe
 340 345 350

Glu Val Leu Phe Ala Cys Thr Gly Ile Ala Leu Gly Tyr Gly Val Cys
 355 360 365

Ser Val Gly Leu Glu Arg Leu Ala Tyr Leu Leu Val Ala Tyr Ser Leu
 370 375 380

Gly Ala Ser Ala Ala Ser Leu Leu Gly Leu Leu Gly Leu Trp Leu Pro
 385 390 395 400

Arg Pro Val Pro Leu Val Ala Gly Ala Gly Val His Leu Leu Leu Thr
 405 410 415

Phe Ile Leu Phe Phe Trp Ala Pro Val Pro Arg Val Leu Gln His Ser
 420 425 430

Trp Ile Leu Tyr Val Ala Ala Ala Leu Trp Gly Val Gly Ser Ala Leu
 435 440 445

Asn Lys Thr Gly Leu Ser Thr Leu Leu Gly Ile Leu Tyr Glu Asp Lys
 450 455 460

Glu Arg Gln Asp Phe Ile Phe Thr Ile Tyr His Trp Trp Gln Ala Val
 465 470 475 480

Ala Ile Phe Thr Val Tyr Leu Gly Ser Ser Leu His Met Lys Ala Lys
 485 490 495

Leu Ala Val Leu Leu Val Thr Leu Val Ala Ala Ala Val Ser Tyr Leu
 500 505 510

Arg Met Glu Gln Lys Leu Arg Arg Gly Val Ala Pro Arg Gln Pro Arg
 515 520 525

Ile Pro Arg Pro Gln His Lys Val Arg Gly Tyr Arg Tyr Leu Glu Glu
 530 535 540

Asp Asn Ser Asp Glu Ser Asp Ala Glu Gly Glu His Gly Asp Gly Ala
 545 550 555 560

Glu Glu Glu Ala Pro Pro Ala Gly Pro Arg Pro Gly Pro Glu Pro Ala
 565 570 575

Gly Leu Gly Arg Arg Pro Cys Pro Tyr Glu Gln Ala Gln Gly Gly Asp
580 585 590

Gly Pro Glu Glu Gln
595

<210> 27
<211> 606
<212> PRT
<213> Homo sapiens

<400> 27

Met Pro Tyr Glu Ile Lys Lys Val Phe Ala Ser Leu Pro Gln Val Glu
1 5 10 15

Arg Gly Val Ser Lys Ile Ile Gly Gly Asp Pro Lys Gly Asn Asn Phe
20 25 30

Leu Tyr Thr Asn Gly Lys Cys Val Ile Leu Arg Asn Ile Asp Asn Pro
35 40 45

Ala Leu Ala Asp Ile Tyr Thr Glu His Ala His Gln Val Val Val Ala
50 55 60

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

Lys Leu Arg Ile Trp Asp Thr Thr Gln Lys Glu His Leu Leu Lys Tyr
85 90 95

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

Asp Ser Lys Arg Ile Ala Val Val Gly Glu Gly Arg Glu Lys Phe Gly
115 120 125

Ala Val Phe Leu Trp Asp Ser Gly Ser Ser Val Gly Glu Ile Thr Gly
130 135 140

His Asn Lys Val Ile Asn Ser Val Asp Ile Lys Gln Ser Arg Pro Tyr
145 150 155 160

Arg Leu Ala Thr Gly Ser Asp Asp Asn Cys Ala Ala Phe Phe Glu Gly
165 170 175

Pro Pro Phe Lys Phe Lys Phe Thr Ile Gly Asp His Ser Arg Phe Val
180 185 190

Asn Cys Val Arg Phe Ser Pro Asp Gly Asn Arg Phe Ala Thr Ala Ser

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

Val Asp Gly Asn Val Arg Leu Tyr Ser Ile Leu Gly Thr Thr Leu Lys
 465 470 475 480

Asp Glu Gly Lys Leu Leu Glu Ala Lys Gly Pro Val Thr Asp Val Ala
 485 490 495

Tyr Ser His Asp Gly Ala Phe Leu Ala Val Cys Asp Ala Ser Lys Val
 500 505 510

Val Thr Val Phe Ser Val Ala Asp Gly Tyr Ser Glu Asn Asn Val Phe
 515 520 525

Tyr Gly His His Ala Lys Ile Val Cys Leu Ala Trp Ser Pro Asp Asn
 530 535 540

Glu His Phe Ala Ser Gly Gly Met Asp Met Met Val Tyr Val Trp Thr
 545 550 555 560

Leu Ser Asp Pro Glu Thr Arg Val Lys Ile Gln Asp Ala His Arg Leu
 565 570 575

His His Val Ser Ser Leu Ala Trp Leu Asp Glu His Thr Leu Val Thr
 580 585 590

Thr Ser His Asp Ala Ser Val Lys Glu Trp Thr Ile Thr Tyr
 595 600 605