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 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Phe Ser Ser Tyr
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 5 Thr Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ala Thr Ile Ser Gly Gly Gly Arg Asp Ile Tyr Tyr Pro Asp Ser Val
 50 55 60
 10 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Val Leu Leu Thr Gly Arg Val Tyr Phe Ala Leu Asp Ser Trp Gly Gln
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 Glu Arg Ala Thr Ile Asn Cys Lys Ala Ser Glu Ser Val Asp Thr Ser
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 25 Asp Asn Ser Phe Ile His Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro
 35 40 45
 Lys Leu Leu Ile Tyr Arg Ser Ser Thr Leu Glu Ser Gly Val Pro Asp
 50 55 60
 30 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Asn Tyr
 85 90 95
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Gln Pro Ala Ser Ile Ser Cys Arg Ala Ser Glu Ser Val Asp Thr Ser
 20 25 30

10

Asp Asn Ser Phe Ile His Trp Tyr Gln Gln Arg Pro Gly Gln Ser Pro
 35 40 45

Arg Leu Leu Ile Tyr Arg Ser Ser Thr Leu Glu Ser Gly Val Pro Asp
 50 55 60

15

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

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

Asp Val Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
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Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Glu Ser Val Asp Thr Ser
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30

Asp Asn Ser Phe Ile His Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro
 35 40 45

Arg Leu Leu Ile Tyr Arg Ser Ser Thr Leu Glu Ser Gly Ile Pro Ala
 50 55 60

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

Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr C
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Asp Val Pro Trp Thr Phe Gly Gln Gly Thr Lys V
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15 Asp Asn Ser Phe Ile His Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro
 35 40 45

Arg Leu Leu Ile Tyr Arg Ser Ser Thr Leu Glu Ser Gly Ile Pro Ala
 50 55 60

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

20 Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Asn Tyr
 85 90 95

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

Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys

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

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

 Ala Thr Ile Ser Gly Gly Gly Arg Asp Ile Tyr Tyr Pro Asp Ser Val
 50 55 60
 20 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
 65 70 75 80

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

 25 Val Leu Leu Thr Gly Arg Val Tyr Phe Ala Leu Asp Ser Trp Gly Gln
 100 105 110

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

 Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
 130 135 140
 30 Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
 145 150 155 160

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

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
 180 185 190
 Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
 195 200 205
 5 Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp
 210 215 220
 Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly
 225 230 235 240
 10 Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
 245 250 255
 Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
 260 265 270
 Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
 275 280 285
 15 Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
 290 295 300
 Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
 305 310 315 320
 Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu
 325 330 335
 20 Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
 340 345 350
 Thr Leu Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
 355 360 365
 25 Trp Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
 370 375 380
 Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
 385 390 395 400
 Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
 405 410 415
 30 Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
 420 425 430
 Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
 435 440 445

Gly Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 450 455 460
 Ala Pro Ala Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His
 465 470 475 480
 5 Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys
 485 490 495
 Asn Pro Lys Leu Thr Arg Met Leu Thr Ala Lys Phe Ala Met Pro Lys
 500 505 510
 10 Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys
 515 520 525
 Pro Leu Glu Glu Val Leu Asn Gly Ala Gln Ser Lys Asn Phe His Leu
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 Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu
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 15 Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala
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 Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Gln Ser Ile
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 Ile Ser Thr Leu Thr
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 30 Thr Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ala Thr Ile Ser Gly Gly Gly Arg Asp Ile Tyr Tyr Pro Asp Ser Val
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr

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	Leu	Gln	Ser	Ser 180	Gly	Leu	Tyr	Ser	Leu 185	Ser	Ser	Val	Val	Thr 190	Val	Pro
15	Ser	Ser	Ser 195	Leu	Gly	Thr	Gln	Thr 200	Tyr	Ile	Cys	Asn	Val 205	Asn	His	Lys
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 Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
 355 360 365
 5 Ser Cys Ala Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
 370 375 380
 Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
 385 390 395 400
 Leu Asp Ser Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val Asp
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 35 40 45
 25 Ala Thr Ile Ser Gly Gly Gly Arg Asp Ile Tyr Tyr Pro Asp Ser Val
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 30 Val Leu Leu Thr Gly Arg Val Tyr Phe Ala Leu Asp Ser Trp Gly Gln
 100 105 110
 Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
 115 120 125

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

Leu Asp Ser Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val Asp
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 Asp Asn Ser Phe Ile His Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro
 35 40 45
 Lys Leu Leu Ile Tyr Arg Ser Ser Thr Leu Glu Ser Gly Val Pro Asp
 50 55 60
 20 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Asn Tyr
 85 90 95
 Asp Val Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
 100 105 110
 25 Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln
 115 120 125
 Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr
 130 135 140
 30 Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser
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 Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr
 165 170 175
 Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys

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

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

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

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

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

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

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

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

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

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

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

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

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30 Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys
35 40 45

Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys
50 55 60

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
 165 170 175
 Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
 180 185 190
 5 Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
 195 200 205
 His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
 210 215 220
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 <213> Homo sapiens
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 15 Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
 1 5 10 15
 Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
 20 25 30
 Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
 35 40 45
 20 Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
 50 55 60
 Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
 65 70 75 80
 25 Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
 85 90 95
 Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
 100 105
 <210> 32
 <211> 105
 <212> PRT
 <213> Homo sapiens
 30 <400> 32
 Gln Pro Lys Ala Ala Pro Ser Val Thr Leu Phe Pro Pro Ser Ser Glu
 1 5 10 15
 Glu Leu Gln Ala Asn Lys Ala Thr Leu Val Cys Leu Ile Ser Asp Phe

20 25 30
 Tyr Pro Gly Ala Val Thr Val Ala Trp Lys Ala Asp Ser Ser Pro Val
 35 40 45
 5 Lys Ala Gly Val Glu Thr Thr Thr Pro Ser Lys Gln Ser Asn Asn Lys
 50 55 60
 Tyr Ala Ala Ser Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser
 65 70 75 80
 His Arg Ser Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val Glu
 85 90 95
 10 Lys Thr Val Ala Pro Thr Glu Cys Ser
 100 105
 <210> 33
 <211> 328
 <212> PRT
 <213> Homo sapiens
 15 <400> 33
 Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
 1 5 10 15
 Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
 20 25 30
 Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
 35 40 45
 20 Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
 50 55 60
 Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
 65 70 75 80
 25 Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
 85 90 95
 Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
 100 105 110
 30 Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
 115 120 125
 Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
 130 135 140
 Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
 145 150 155 160

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
 165 170 175
 Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
 180 185 190
 5 His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
 195 200 205
 Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
 210 215 220
 10 Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu
 225 230 235 240
 Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
 245 250 255
 Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
 260 265 270
 15 Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
 275 280 285
 Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
 290 295 300
 20 Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
 305 310 315 320
 Gln Lys Ser Leu Ser Leu Ser Pro
 325
 <210> 34
 <211> 607
 <212> PRT
 25 <213> Artificial Sequence
 <220>
 <223> Synthetic Construct
 <400> 34
 Glu Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
 1 5 10 15
 30 Ser Leu Ser Leu Thr Cys Ser Val Thr Gly Tyr Ser Ile Thr Ser Ser
 20 25 30
 Tyr Arg Trp Asn Trp Ile Arg Lys Phe Pro Gly Asn Arg Leu Glu Trp
 35 40 45

Met Gly Tyr Ile Asn Ser Ala Gly Ile Ser Asn Tyr Asn Pro Ser Leu
 50 55 60
 Lys Arg Arg Ile Ser Ile Thr Arg Asp Thr Ser Lys Asn Gln Phe Phe
 65 70 75 80
 5 Leu Gln Val Asn Ser Val Thr Thr Glu Asp Ala Ala Thr Tyr Tyr Cys
 85 90
 Ala Arg Ser Asp Asn Met Gly Thr Thr Pro Phe Thr Tyr Trp Gly Gln
 100 105 110
 Gly Thr Leu Val Thr Val Ser Ser Ala Lys Thr Thr Pro Pro Ser Val
 115 120 125
 10 Tyr Pro Leu Ala Pro Gly Ser Ala Ala Gln Thr Asn Ser Met Val Thr
 130 135 140
 Leu Gly Cys Leu Val Lys Gly Tyr Phe Pro Glu Pro Val Thr Val Thr
 145 150 155 160
 15 Trp Asn Ser Gly Ser Leu Ser Ser Gly Val His Thr Phe Pro Ala Val
 165 170 175
 Leu Gln Ser Asp Leu Tyr Thr Leu Ser Ser Ser Val Thr Val Pro Ser
 180 185 190
 Ser Thr Trp Pro Ser Gln Thr Val Thr Cys Asn Val Ala His Pro Ala
 195 200 205
 20 Ser Ser Thr Lys Val Asp Lys Lys Ile Val Pro Arg Asp Cys Gly Cys
 210 215 220
 Lys Pro Cys Ile Cys Thr Val Pro Glu Val Ser Ser Val Phe Ile Phe
 225 230 235 240
 25 Pro Pro Lys Pro Lys Asp Val Leu Thr Ile Thr Leu Thr Pro Lys Val
 245 250 255
 Thr Cys Val Val Val Ala Ile Ser Lys Asp Asp Pro Glu Val Gln Phe
 260 265 270
 Ser Trp Phe Val Asp Asp Val Glu Val His Thr Ala Gln Thr Lys Pro
 275 280 285
 30 Arg Glu Glu Gln Ile Asn Ser Thr Phe Arg Ser Val Ser Glu Leu Pro
 290 295 300
 Ile Met His Gln Asp Trp Leu Asn Gly Lys Glu Phe Lys Cys Arg Val
 305 310 315 320

Asn Ser Ala Ala Phe Gly Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr
 325 330 335
 Lys Gly Arg Pro Lys Ala Pro Gln Val Tyr Thr Ile Pro Pro Pro Lys
 340 345 350
 5 Glu Gln Met Ala Lys Asp Lys Val Ser Leu Thr Cys Met Ile Thr Asn
 355 360 365
 Phe Phe Pro Glu Asp Ile Thr Val Glu Trp Gln Trp Asn Gly Gln Pro
 370 375 380
 10 Ala Glu Asn Tyr Asp Asn Thr Gln Pro Ile Met Asp Thr Asp Gly Ser
 385 390 395 400
 Tyr Phe Val Tyr Ser Asp Leu Asn Val Gln Lys Ser Asn Trp Glu Ala
 405 410 415
 Gly Asn Thr Phe Thr Cys Ser Val Leu His Glu Gly Leu His Asn His
 420 425 430
 15 His Thr Glu Lys Ser Leu Ser His Ser Pro Gly Gly Gly Gly Gly Ser
 435 440 445
 Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Pro Ala Ser Ser Ser
 450 455 460
 Thr Ser Ser Ser Thr Ala Glu Ala Gln Gln Gln Gln Gln Gln
 465 470 475 480
 20 Gln Gln Gln Gln His Leu Glu Gln Leu Leu Met Asp Leu Gln Glu Leu
 485 490 495
 Leu Ser Arg Met Glu Asn Tyr Arg Asn Leu Lys Leu Pro Arg Met Leu
 500 505 510
 25 Thr Ala Lys Phe Ala Leu Pro Lys Gln Ala Thr Glu Leu Lys Asp Leu
 515 520 525
 Gln Cys Leu Glu Asp Glu Leu Gly Pro Leu Arg His Val Leu Asp Gly
 530 535 540
 Thr Gln Ser Lys Ser Phe Gln Leu Glu Asp Ala Glu Asn Phe Ile Ser
 545 550 555 560
 30 Asn Ile Arg Val Thr Val Val Lys Leu Lys Gly Ser Asp Asn Thr Phe
 565 570 575
 Glu Cys Gln Phe Asp Asp Glu Ser Ala Thr Val Val Asp Phe Leu Arg
 580 585 590

Arg Trp Ile Ala Phe Ala Gln Ser Ile Ile Ser Thr Ser Pro Gln
 595 600 605

<210> 35
 <211> 442
 <212> PRT
 <213> Artificial Sequence

5

<220>
 <223> Synthetic Construct
 <400> 35

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

10

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

Tyr Arg Trp Asn Trp Ile Arg Lys Phe Pro Gly Asn Arg Leu Glu Trp
 35 40 45

Met Gly Tyr Ile Asn Ser Ala Gly Ile Ser Asn Tyr Asn Pro Ser Leu
 50 55 60

15

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

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

20

Ala Arg Ser Asp Asn Met Gly Thr Thr Pro Phe Thr Tyr Trp Gly Gln
 100 105 110

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

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

25

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

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

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

30

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

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

Lys Pro Cys Ile Cys Thr Val Pro Glu Val Ser Ser Val Phe Ile Phe
 225 230 235 240
 5 Pro Pro Lys Pro Lys Asp Val Leu Thr Ile Thr Leu Thr Pro Lys Val
 245 250 255
 Thr Cys Val Val Val Ala Ile Ser Lys Asp Asp Pro Glu Val Gln Phe
 260 265 270
 Ser Trp Phe Val Asp Asp Val Glu Val His Thr Ala Gln Thr Lys Pro
 275 280 285
 10 Arg Glu Glu Gln Ile Asn Ser Thr Phe Arg Ser Val Ser Glu Leu Pro
 290 295 300
 Ile Met His Gln Asp Trp Leu Asn Gly Lys Glu Phe Lys Cys Arg Val
 305 310 315 320
 Asn Ser Ala Ala Phe Gly Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr
 325 330 335
 15 Lys Gly Arg Pro Lys Ala Pro Gln Val Tyr Thr Ile Pro Pro Pro Lys
 340 345 350
 Lys Gln Met Ala Lys Asp Lys Val Ser Leu Thr Cys Met Ile Thr Asn
 355 360 365
 20 Phe Phe Pro Glu Asp Ile Thr Val Glu Trp Gln Trp Asn Gly Gln Pro
 370 375 380
 Ala Glu Asn Tyr Lys Asn Thr Gln Pro Ile Met Lys Thr Asp Gly Ser
 385 390 395 400
 Tyr Phe Val Tyr Ser Lys Leu Asn Val Gln Lys Ser Asn Trp Glu Ala
 405 410 415
 25 Gly Asn Thr Phe Thr Cys Ser Val Leu His Glu Gly Leu His Asn His
 420 425 430
 His Thr Glu Lys Ser Leu Ser His Ser Pro
 435 440
 30 <210> 36
 <211> 218
 <212> PRT
 <213> Artificial sequence
 <220>
 <223> Synthetic Construct
 <400> 36

Asp Ile Val Met Thr Gln Gly Thr Leu Pro Asn Pro Val Pro Ser Gly
 1 5 10 15
 Glu Ser Val Ser Ile Thr Cys Arg Ser Ser Lys Ser Leu Leu Tyr Ser
 20 25 30
 5 Asp Gly Lys Thr Tyr Leu Asn Trp Tyr Leu Gln Arg Pro Gly Gln Ser
 35 40 45
 Pro Gln Leu Leu Ile Tyr Trp Met Ser Thr Arg Ala Ser Gly Val Ser
 50 55 60
 10 Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80
 Ser Gly Val Glu Ala Glu Asp Val Gly Ile Tyr Tyr Cys Gln Gln Gly
 85 90 95
 Leu Glu Phe Pro Thr Phe Gly Gly Gly Thr Lys Leu Glu Leu Lys Arg
 100 105 110
 15 Thr Asp Ala Ala Pro Thr Val Ser Ile Phe Pro Pro Ser Ser Glu Gln
 115 120 125
 Leu Thr Ser Gly Gly Ala Ser Val Val Cys Phe Leu Asn Asn Phe Tyr
 130 135 140
 Pro Lys Asp Ile Asn Val Lys Trp Lys Ile Asp Gly Ser Glu Arg Gln
 145 150 155 160
 20 Asn Gly Val Leu Asn Ser Trp Thr Asp Gln Asp Ser Lys Asp Ser Thr
 165 170 175
 Tyr Ser Met Ser Ser Thr Leu Thr Leu Thr Lys Asp Glu Tyr Glu Arg
 180 185 190
 25 His Asn Ser Tyr Thr Cys Glu Ala Thr His Lys Thr Ser Thr Ser Pro
 195 200 205
 Ile Val Lys Ser Phe Asn Arg Asn Glu Cys
 210 215
 <210> 37
 <211> 595
 <212> PRT
 <213> Artificial Sequence
 30 <220>
 <223> Synthetic Construct
 <400> 37
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15

Ser Leu Arg Leu₂₀ Ser Cys Ala Ala Ser₂₅ Gly Phe Thr Phe Ser₃₀ Asp Ser
 Trp Ile His₃₅ Trp Val Arg Gln₄₀ Ala Pro Gly Lys Gly₄₅ Leu Glu Trp Val
 5 Ala Trp Ile Ser Pro Tyr Gly₅₅ Gly Ser Thr Tyr Tyr₆₀ Ala Asp Ser Val
 Lys₆₅ Gly Arg Phe Thr Ile₇₀ Ser Ala Asp Thr Ser₇₅ Lys Asn Thr Ala Tyr₈₀
 10 Leu Gln Met Asn Ser₈₅ Leu Arg Ala Glu Asp₉₀ Thr Ala Val Tyr Tyr₉₅ Cys
 Ala Arg Arg His₁₀₀ Trp Pro Gly Gly Phe₁₀₅ Asp Tyr Trp Gly Gln₁₁₀ Gly Thr
 Leu Val Thr₁₁₅ Val Ser Ala Ala Ser₁₂₀ Thr Lys Gly Pro Ser₁₂₅ Val Phe Pro
 15 Leu Ala Pro Ser Ser Lys Ser₁₃₅ Thr Ser Gly Gly Thr₁₄₀ Ala Ala Leu Gly
 Cys₁₄₅ Leu Val Lys Asp Tyr₁₅₀ Phe Pro Glu Pro Val₁₅₅ Thr Val Ser Trp Asn₁₆₀
 20 Ser Gly Ala Leu Thr₁₆₅ Ser Gly Val His Thr₁₇₀ Phe Pro Ala Val Leu Gln₁₇₅
 Ser Ser Gly Leu₁₈₀ Tyr Ser Leu Ser Ser₁₈₅ Val Val Thr Val Pro₁₉₀ Ser Ser
 Ser Leu Gly₁₉₅ Thr Gln Thr Tyr Ile₂₀₀ Cys Asn Val Asn His₂₀₅ Lys Pro Ser
 25 Asn Thr₂₁₀ Lys Val Asp Lys Lys₂₁₅ Val Glu Pro Lys Ser₂₂₀ Cys Asp Lys Thr
 His Thr Cys Pro Pro Cys₂₃₀ Pro Ala Pro Glu Ala₂₃₅ Ala Gly Gly Pro Ser₂₄₀
 Val Phe Leu Phe Pro₂₄₅ Pro Lys Pro Lys Asp₂₅₀ Thr Leu Met Ile Ser₂₅₅ Arg
 30 Thr Pro Glu Val₂₆₀ Thr Cys Val Val Val₂₆₅ Asp Val Ser His Glu₂₇₀ Asp Pro
 Glu Val Lys₂₇₅ Phe Asn Trp Tyr Val₂₈₀ Asp Gly Val Glu Val₂₈₅ His Asn Ala

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
 290 295 300
 Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
 305 310 315 320
 5 Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys Thr
 325 330 335
 Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
 340 345 350
 10 Pro Pro Cys Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Trp Cys
 355 360 365
 Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
 370 375 380
 Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
 385 390 395 400
 15 Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
 405 410 415
 Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
 420 425 430
 20 Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Gly
 435 440 445
 Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Pro
 450 455 460
 Ala Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu Leu
 465 470 475 480
 25 Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro
 485 490 495
 Lys Leu Thr Arg Met Leu Thr Ala Lys Phe Ala Met Pro Lys Lys Ala
 500 505 510
 30 Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu
 515 520 525
 Glu Glu Val Leu Asn Gly Ala Gln Ser Lys Asn Phe His Leu Arg Pro
 530 535 540
 Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly
 545 550 555 560

	Ser	Glu	Thr	Thr	Phe	Met	Cys	Glu	Tyr	Ala	Asp	Glu	Thr	Ala	Thr	Ile
					565					570					575	
5	Val	Glu	Phe	Leu	Asn	Arg	Trp	Ile	Thr	Phe	Ala	Gln	Ser	Ile	Ile	Ser
				580					585					590		
	Thr	Leu	Thr													
			595													
	<210>		38													
	<211>		446													
	<212>		PRT													
10	<213>		Artificial	Sequence												
	<220>															
	<223>		Synthetic	Construct												
	<400>		38													
	Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu	Val	Gln	Pro	Gly	Gly
	1				5					10					15	
15	Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Phe	Thr	Phe	Ser	Asp	Ser
				20					25					30		
	Trp	Ile	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val
			35					40					45			
	Ala	Trp	Ile	Ser	Pro	Tyr	Gly	Gly	Ser	Thr	Tyr	Tyr	Ala	Asp	Ser	Val
		50					55					60				
20	Lys	Gly	Arg	Phe	Thr	Ile	Ser	Ala	Asp	Thr	Ser	Lys	Asn	Thr	Ala	Tyr
	65					70					75					80
	Leu	Gln	Met	Asn	Ser	Leu	Arg	Ala	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
				85						90					95	
	Ala	Arg	Arg	His	Trp	Pro	Gly	Gly	Phe	Asp	Tyr	Trp	Gly	Gln	Gly	Thr
25				100					105					110		
	Leu	Val	Thr	Val	Ser	Ala	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe	Pro
			115					120					125			
	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu	Gly
		130					135					140				
30	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp	Asn
	145					150					155					160
	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu	Gln
					165					170					175	

Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val⁻ Thr Val Pro Ser Ser
 180 185 190
 Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser
 195 200 205
 5 Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr
 210 215 220
 His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser
 225 230 235 240
 Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
 245 250 255
 10 Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
 260 265 270
 Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
 275 280 285
 15 Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
 290 295 300
 Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
 305 310 315 320
 Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys Thr
 325 330 335
 20 Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Cys Thr Leu
 340 345 350
 Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Ser Cys
 355 360 365
 25 Ala Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
 370 375 380
 Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
 385 390 395 400
 Ser Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val Asp Lys Ser
 405 410 415
 30 Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
 420 425 430
 Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
 435 440 445

<210> 39
 <211> 214
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Synthetic Construct

 5 <400> 39
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Val Ser Thr Ala
 20 25 30
 10 Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
 35 40 45
 Tyr Ser Ala Ser Phe Leu Tyr Ser Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 15 Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Leu Tyr His Pro Ala
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
 100 105 110
 Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
 115 120 125
 20 Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
 130 135 140
 Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
 145 150 155 160
 25 Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
 165 170 175
 Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
 180 185 190
 Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
 195 200 205
 30 Phe Asn Arg Gly Glu Cys
 210

 <210> 40
 <211> 605

<212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct

<400> 40

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

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

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

10 Ala Trp Ile Ser Pro Tyr Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
 50 55 60

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

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

Ala Arg Arg His Trp Pro Gly Gly Phe Asp Tyr Trp Gly Gln Gly Thr
 100 105 110

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

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

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

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

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

Trp Pro Ser Glu Thr Val Thr Cys Asn Val Ala His Pro Ala Ser Ser
 195 200 205

30 Thr Lys Val Asp Lys Lys Ile Val Pro Arg Asp Cys Gly Cys Lys Pro
 210 215 220

Cys Ile Cys Thr Val Pro Glu Val Ser Ser Val Phe Ile Phe Pro Pro
 225 230 235 240

Lys Pro Lys Asp Val₂₄₅ Leu Thr Ile Thr Leu₂₅₀ Thr Pro Lys Val Thr₂₅₅ Cys
 Val Val Val Ala₂₆₀ Ile Ser Lys Asp Asp₂₆₅ Pro Glu Val Gln Phe₂₇₀ Ser Trp
 5 Phe Val Asp₂₇₅ Asp Val Glu Val His₂₈₀ Thr Ala Gln Thr Gln₂₈₅ Pro Arg Glu
 Glu Gln₂₉₀ Phe Asn Ser Thr Phe₂₉₅ Arg Ser Val Ser Glu₃₀₀ Leu Pro Ile Met
 10 His₃₀₅ Gln Asp Trp Leu Asn₃₁₀ Gly Lys Glu Phe Lys₃₁₅ Cys Arg Val Asn Ser₃₂₀
 Ala Ala Phe Gly Ala₃₂₅ Pro Ile Glu Lys Thr₃₃₀ Ile Ser Lys Thr Lys₃₃₅ Gly
 Arg Pro Lys Ala₃₄₀ Pro Gln Val Tyr Thr₃₄₅ Ile Pro Pro Pro Lys₃₅₀ Glu Gln
 15 Met Ala Lys₃₅₅ Asp Lys Val Ser Leu₃₆₀ Thr Cys Met Ile Thr₃₆₅ Asp Phe Phe
 Pro Glu₃₇₀ Asp Ile Thr Val Glu₃₇₅ Trp Gln Trp Asn Gly₃₈₀ Gln Pro Ala Glu
 Asn Tyr Asp Asn Thr Gln₃₉₀ Pro Ile Met Asp Thr₃₉₅ Asp Gly Ser Tyr Phe₄₀₀
 20 Val Tyr Ser Asp Leu₄₀₅ Asn Val Gln Lys Ser₄₁₀ Asn Trp Glu Ala Gly₄₁₅ Asn
 Thr Phe Thr Cys₄₂₀ Ser Val Leu His Glu₄₂₅ Gly Leu His Asn His₄₃₀ His Thr
 Glu Lys Ser₄₃₅ Leu Ser His Ser Pro₄₄₀ Gly Gly Gly Gly Gly₄₄₅ Ser Gly Gly
 25 Gly Gly₄₅₀ Ser Gly Gly Gly Gly₄₅₅ Ser Ala Pro Ala Ser₄₆₀ Ser Ser Thr Ser
 Ser Ser Thr Ala Glu Ala₄₇₀ Gln Gln Gln Gln Gln₄₇₅ Gln Gln Gln Gln Gln
 30 Gln Gln His Leu Glu₄₈₅ Gln Leu Leu Met Asp₄₉₀ Leu Gln Glu Leu Leu₄₉₅ Ser
 Arg Met Glu Asn₅₀₀ Tyr Arg Asn Leu Lys₅₀₅ Leu Pro Arg Met Leu₅₁₀ Thr Ala

Lys Phe Ala₅₁₅ Leu Pro Lys Gln Ala₅₂₀ Thr Glu Leu Lys Asp₅₂₅ Leu Gln Cys
 Leu Glu₅₃₀ Asp Glu Leu Gly Pro₅₃₅ Leu Arg His Val₅₄₀ Leu Asp Gly Thr Gln
 5 Ser₅₄₅ Lys Ser Phe Gln Leu₅₅₀ Glu Asp Ala Glu Asn₅₅₅ Phe Ile Ser Asn Ile₅₆₀
 Arg Val Thr Val₅₆₅ Lys Leu Lys Gly Ser₅₇₀ Asp Asn Thr Phe Glu₅₇₅ Cys
 Gln Phe Asp Asp₅₈₀ Glu Ser Ala Thr Val₅₈₅ Val Asp Phe Leu Arg₅₉₀ Arg Trp
 10 Ile Ala Phe₅₉₅ Ala Gln Ser Ile Ile₆₀₀ Ser Thr Ser Pro Gln₆₀₅
 <210> 41
 <211> 440
 <212> PRT
 <213> Artificial Sequence
 15 <220>
 <223> Synthetic Construct
 <400> 41
 Glu Val Gln Leu Val₅ Glu Ser Gly Gly₁₀ Leu Val Gln Pro Gly₁₅ Gly
 1 Ser Leu Arg Leu₂₀ Ser Cys Ala Ala Ser₂₅ Gly Phe Thr Phe Ser₃₀ Asp Ser
 20 Trp Ile His₃₅ Trp Val Arg Gln Ala₄₀ Pro Gly Lys Gly₄₅ Leu Glu Trp Val
 Ala Trp₅₀ Ile Ser Pro Tyr Gly₅₅ Gly Ser Thr Tyr Tyr₆₀ Ala Asp Ser Val
 25 Lys Gly Arg Phe Thr Ile₇₀ Ser Ala Asp Thr Ser₇₅ Lys Asn Thr Ala Tyr₈₀
 Leu Gln Met Asn₈₅ Ser Leu Arg Ala Glu Asp₉₀ Thr Ala Val Tyr Tyr₉₅ Cys
 Ala Arg Arg His₁₀₀ Trp Pro Gly Gly Phe₁₀₅ Asp Tyr Trp Gly Gln₁₁₀ Gly Thr
 30 Leu Val Thr₁₁₅ Val Ser Ala Ala Lys₁₂₀ Thr Thr Pro Pro Ser₁₂₅ Val Tyr Pro
 Leu Ala₁₃₀ Pro Gly Ser Ala Ala₁₃₅ Gln Thr Asn Ser Met₁₄₀ Val Thr Leu Gly

Cys Leu Val Lys Gly Tyr Phe Pro Glu Pro Val Thr Val Thr Trp Asn
 145 150 155 160
 Ser Gly Ser Leu Ser Ser Gly Val His Thr Phe Pro Ala Val Leu Gln
 5 165 170 175
 Ser Asp Leu Tyr Thr Leu Ser Ser Ser Val Thr Val Pro Ser Ser Thr
 180 185 190
 Trp Pro Ser Glu Thr Val Thr Cys Asn Val Ala His Pro Ala Ser Ser
 195 200 205
 10 Thr Lys Val Asp Lys Lys Ile Val Pro Arg Asp Cys Gly Cys Lys Pro
 210 215 220
 Cys Ile Cys Thr Val Pro Glu Val Ser Ser Val Phe Ile Phe Pro Pro
 225 230 235 240
 Lys Pro Lys Asp Val Leu Thr Ile Thr Leu Thr Pro Lys Val Thr Cys
 245 250 255
 15 Val Val Val Ala Ile Ser Lys Asp Asp Pro Glu Val Gln Phe Ser Trp
 260 265 270
 Phe Val Asp Asp Val Glu Val His Thr Ala Gln Thr Gln Pro Arg Glu
 275 280 285
 20 Glu Gln Phe Asn Ser Thr Phe Arg Ser Val Ser Glu Leu Pro Ile Met
 290 295 300
 His Gln Asp Trp Leu Asn Gly Lys Glu Phe Lys Cys Arg Val Asn Ser
 305 310 315 320
 Ala Ala Phe Gly Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly
 325 330 335
 25 Arg Pro Lys Ala Pro Gln Val Tyr Thr Ile Pro Pro Pro Lys Lys Gln
 340 345 350
 Met Ala Lys Asp Lys Val Ser Leu Thr Cys Met Ile Thr Asp Phe Phe
 355 360 365
 30 Pro Glu Asp Ile Thr Val Glu Trp Gln Trp Asn Gly Gln Pro Ala Glu
 370 375 380
 Asn Tyr Lys Asn Thr Gln Pro Ile Met Lys Thr Asp Gly Ser Tyr Phe
 385 390 395 400
 Val Tyr Ser Lys Leu Asn Val Gln Lys Ser Asn Trp Glu Ala Gly Asn
 405 410 415

Thr Phe Thr Cys Ser Val Leu His Glu Gly Leu His Asn His His Thr
 420 425 430

Glu Lys Ser Leu Ser His Ser Pro
 435 440

5

<210> 42
 <211> 214
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct

10

<400> 42

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

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

15

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

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

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

20

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

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

25

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

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

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

30

Asn Ser Trp Thr Asp Gln Asp Ser Lys Asp Ser Thr Tyr Ser Met Ser
 165 170 175

Ser Thr Leu Thr Leu Thr Lys Asp Glu Tyr Glu Arg His Asn Ser Tyr
 180 185 190

Thr Cys Glu Ala Thr His Lys Thr Ser Thr Ser Pro Ile Val Lys Ser
195 200 205

Phe Asn Arg Asn Glu Cys
210

5 <210> 43
<211> 150
<212> PRT
<213> Homo sapiens

<400> 43

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

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

Thr Cys Ser Phe Ser Asn Thr Ser Glu Ser Phe Val Leu Asn Trp Tyr
35 40 45

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

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

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

20 Asp Ser Gly Thr Tyr Leu Cys Gly Ala Ile Ser Leu Ala Pro Lys Ala
100 105 110

Gln Ile Lys Glu Ser Leu Arg Ala Glu Leu Arg Val Thr Glu Arg Arg
115 120 125

Ala Glu Val Pro Thr Ala His Pro Ser Pro Ser Pro Arg Pro Ala Gly
130 135 140

25 Gln Phe Gln Thr Leu Val
145 150

<210> 44
<211> 608
<212> PRT
<213> Artificial Sequence

30 <220>
<223> Synthetic Construct

<400> 44

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

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

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

Pro Ile Met His Gln Asp Trp Leu Asn Gly Lys Glu Phe Lys Cys Arg
 305 310 315 320

5
 Val Asn Ser Ala Ala Phe Gly Ala Pro Ile Glu Lys Thr Ile Ser Lys
 325 330 335

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

10
 Lys Glu Gln Met Ala Lys Asp Lys Val Ser Leu Thr Cys Met Ile Thr
 355 360 365

Asn Phe Phe Pro Glu Asp Ile Thr Val Glu Trp Gln Trp Asn Gly Gln
 370 375 380

Pro Ala Glu Asn Tyr Asp Asn Thr Gln Pro Ile Met Asp Thr Asp Gly
 385 390 395 400

15
 Ser Tyr Phe Val Tyr Ser Asp Leu Asn Val Gln Lys Ser Asn Trp Glu
 405 410 415

Ala Gly Asn Thr Phe Thr Cys Ser Val Leu His Glu Gly Leu His Asn
 420 425 430

20
 His His Thr Glu Lys Ser Leu Ser His Ser Pro Gly Gly Gly Gly Gly
 435 440 445

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Pro Ala Ser Ser
 450 455 460

Ser Thr Ser Ser Ser Thr Ala Glu Ala Gln Gln Gln Gln Gln Gln
 465 470 475 480

25
 Gln Gln Gln Gln Gln His Leu Glu Gln Leu Leu Met Asp Leu Gln Glu
 485 490 495

Leu Leu Ser Arg Met Glu Asn Tyr Arg Asn Leu Lys Leu Pro Arg Met
 500 505 510

Leu Thr Ala Lys Phe Ala Leu Pro Lys Gln Ala Thr Glu Leu Lys Asp
 515 520 525

30
 Leu Gln Cys Leu Glu Asp Glu Leu Gly Pro Leu Arg His Val Leu Asp
 530 535 540

Gly Thr Gln Ser Lys Ser Phe Gln Leu Glu Asp Ala Glu Asn Phe Ile
 545 550 555 560

Ser Asn Ile Arg Val Thr Val Val Lys Leu Lys Gl
 565 570

Phe Glu Cys Gln Phe Asp Asp Glu Ser Ala Thr Va
 580 585

5 Arg Arg Trp Ile Ala Phe Ala Gln Ser Ile Ile Se
 595 600

<210> 45
 <211> 445
 <212> PRT
 <213> Artificial Sequence

10 <220>
 <223> Synthetic Construct
 <400> 45

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

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

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

Gly Trp Ile Asn Thr Lys Thr Gly Glu Ala Thr Tyr Val Glu Glu Phe
 50 55 60

20 Lys Gly Arg Val Thr Phe Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80

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

Ala Arg Trp Asp Phe Ala Tyr Tyr Val Glu Ala Met Asp Tyr Trp Gly
 100 105 110

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

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

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

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

Val Leu Gln Ser Asp Leu Tyr Thr Leu Ser Ser Ser Val Thr Val Pro

30

<211> 215
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct

<400> 46

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

Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Ala Ala Val Gly Thr Tyr
 20 25 30

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

Tyr Ser Ala Ser Tyr Arg Lys Arg Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60

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

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

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

Ala Pro Thr Val Ser Ile Phe Pro Pro Ser Ser Glu Gln Leu Thr Ser
 115 120 125

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

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

25 Leu Asn Ser Trp Thr Asp Gln Asp Ser Lys Asp Ser Thr Tyr Ser Met
 165 170 175

Ser Ser Thr Leu Thr Leu Thr Lys Asp Glu Tyr Glu Arg His Asn Ser
 180 185 190

Tyr Thr Cys Glu Ala Thr His Lys Thr Ser Thr Ser Pro Ile Val Lys
 195 200 205

30 Ser Phe Asn Arg Asn Glu Cys
 210 215

<210> 47
 <211> 604
 <212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct

<400> 47

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

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

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

10 Ser Ala Ile Ile Gly Ser Gly Ala Ser Thr Tyr Tyr Ala Asp Ser Val
50 55 60

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

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

Ala Lys Gly Trp Phe Gly Gly Phe Asn Tyr Trp Gly Gln Gly Thr Leu
100 105 110

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

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

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

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

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

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

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

Ile Cys Thr Val Pro Glu Val Ser Ser Val Phe Ile Phe Pro Pro Lys
225 230 235 240

Pro Lys Asp Val Leu Thr Ile Thr Leu Thr Pro Lys Val Thr Cys Val

	245	250	255
	Val Val Ala Ile Ser Lys Asp Asp Pro Glu Val Gln Phe Ser Trp Phe		
		260	265 270
5	Val Asp Asp Val Glu Val His Thr Ala Gln Thr Lys Pro Arg Glu Glu		
		275 280	285
	Gln Ile Asn Ser Thr Phe Arg Ser Val Ser Glu Leu Pro Ile Met His		
		290 295	300
	Gln Asp Trp Leu Asn Gly Lys Glu Phe Lys Cys Arg Val Asn Ser Ala		
		305 310 315	320
10	Ala Phe Gly Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Arg		
		325 330	335
	Pro Lys Ala Pro Gln Val Tyr Thr Ile Pro Pro Pro Lys Glu Gln Met		
		340 345	350
15	Ala Lys Asp Lys Val Ser Leu Thr Cys Met Ile Thr Asn Phe Phe Pro		
		355 360	365
	Glu Asp Ile Thr Val Glu Trp Gln Trp Asn Gly Gln Pro Ala Glu Asn		
		370 375	380
	Tyr Asp Asn Thr Gln Pro Ile Met Asp Thr Asp Gly Ser Tyr Phe Val		
		385 390 395	400
20	Tyr Ser Asp Leu Asn Val Gln Lys Ser Asn Trp Glu Ala Gly Asn Thr		
		405 410	415
	Phe Thr Cys Ser Val Leu His Glu Gly Leu His Asn His His Thr Glu		
		420 425	430
	Lys Ser Leu Ser His Ser Pro Gly Gly Gly Gly Gly Ser Gly Gly Gly		
		435 440 445	
25	Gly Ser Gly Gly Gly Gly Ser Ala Pro Ala Ser Ser Ser Thr Ser Ser		
		450 455 460	
	Ser Thr Ala Glu Ala Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln		
		465 470 475 480	
30	Gln His Leu Glu Gln Leu Leu Met Asp Leu Gln Glu Leu Leu Ser Arg		
		485 490	495
	Met Glu Asn Tyr Arg Asn Leu Lys Leu Pro Arg Met Leu Thr Ala Lys		
		500 505 510	
	Phe Ala Leu Pro Lys Gln Ala Thr Glu Leu Lys Asp Leu Gln Cys Leu		

515 520 525
 Glu Asp Glu Leu Gly Pro Leu Arg His Val Leu Asp Gly Thr Gln Ser
 530 535 540
 5 Lys Ser Phe Gln Leu Glu Asp Ala Glu Asn Phe Ile Ser Asn Ile Arg
 545 550 555 560
 Val Thr Val Val Lys Leu Lys Gly Ser Asp Asn Thr Phe Glu Cys Gln
 565 570 575
 Phe Asp Asp Glu Ser Ala Thr Val Val Asp Phe Leu Arg Arg Trp Ile
 580 585 590
 10 Ala Phe Ala Gln Ser Ile Ile Ser Thr Ser Pro Gln
 595 600
 <210> 48
 <211> 441
 <212> PRT
 <213> Artificial Sequence
 15 <220>
 <223> Synthetic Construct
 <400> 48
 Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
 20 25 30
 20 Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Ala Ile Ile Gly Ser Gly Ala Ser Thr Tyr Tyr Ala Asp Ser Val
 50 55 60
 25 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Lys Gly Trp Phe Gly Gly Phe Asn Tyr Trp Gly Gln Gly Thr Leu
 100 105 110
 30 Val Thr Val Ser Ser Ala Lys Thr Thr Pro Pro Ser Val Tyr Pro Leu
 115 120 125
 Ala Pro Gly Ser Ala Ala Gln Thr Asn Ser Met Val Thr Leu Gly Cys
 130 135 140

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

Phe Thr Cys Ser Val Leu His Glu Gly Leu His Asn His His Thr Glu
 420 425 430

Lys Ser Leu Ser His Ser Pro Gly Lys
 435 440

5 <210> 49
 <211> 215
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Synthetic Construct

 <400> 49

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

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

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

 Ile Asn Val Gly Ser Arg Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
 50 55 60

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

20 Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Gly Ile Met Leu Pro
 85 90 95

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

 Ala Pro Thr Val Ser Ile Phe Pro Pro Ser Ser Glu Gln Leu Thr Ser
 115 120 125

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

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

30 Leu Asn Ser Trp Thr Asp Gln Asp Ser Lys Asp Ser Thr Tyr Ser Met
 165 170 175

 Ser Ser Thr Leu Thr Leu Thr Lys Asp Glu Tyr Glu Arg His Asn Ser
 180 185 190

 Tyr Thr Cys Glu Ala Thr His Lys Thr Ser Thr Ser Pro Ile Val Lys

	195	200	205
	Ser Phe Asn Arg Asn Glu Cys		
	210	215	
5	<210> 50		
	<211> 450		
	<212> PRT		
	<213> Artificial Sequence		
	<220>		
	<223> Synthetic Construct		
	<400> 50		
10	Glu Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln		
	1 5 10 15		
	Ser Leu Ser Leu Thr Cys Ser Val Thr Gly Tyr Ser Ile Thr Ser Ser		
	20 25 30		
	Tyr Arg Trp Asn Trp Ile Arg Lys Phe Pro Gly Asn Arg Leu Glu Trp		
	35 40 45		
15	Met Gly Tyr Ile Asn Ser Ala Gly Ile Ser Asn Tyr Asn Pro Ser Leu		
	50 55 60		
	Lys Arg Arg Ile Ser Ile Thr Arg Asp Thr Ser Lys Asn Gln Phe Phe		
	65 70 75 80		
	Leu Gln Val Asn Ser Val Thr Thr Glu Asp Ala Ala Thr Tyr Tyr Cys		
	85 90 95		
20	Ala Arg Ser Asp Asn Met Gly Thr Thr Pro Phe Thr Tyr Trp Gly Gln		
	100 105 110		
	Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Thr Ala Pro Ser Val		
	115 120 125		
25	Tyr Pro Leu Ala Pro Val Cys Gly Asp Thr Thr Gly Ser Ser Val Thr		
	130 135 140		
	Leu Gly Cys Leu Val Lys Gly Tyr Phe Pro Glu Pro Val Thr Leu Thr		
	145 150 155 160		
	Trp Asn Ser Gly Ser Leu Ser Ser Gly Val His Thr Phe Pro Ala Val		
	165 170 175		
30	Leu Gln Ser Asp Leu Tyr Thr Leu Ser Ser Ser Val Thr Val Thr Ser		
	180 185 190		
	Ser Thr Trp Pro Ser Gln Ser Ile Thr Cys Asn Val Ala His Pro Ala		
	195 200 205		

Ser Ser Thr Lys Val Asp Lys Lys Ile Glu Pro Arg Gly Pro Thr Ile
 210 215 220
 Lys Pro Cys Pro Pro Cys Lys Cys Pro Ala Pro Asn Ala Ala Gly Gly
 225 230 235 240
 5 Pro Ser Val Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met Ile
 245 250 255
 Ser Leu Ser Pro Ile Val Thr Cys Val Val Val Asp Val Ser Glu Asp
 260 265 270
 10 Asp Pro Asp Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His
 275 280 285
 Thr Ala Gln Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu Arg
 290 295 300
 Val Val Ser Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys
 305 310 315 320
 15 Glu Phe Lys Cys Lys Val Asn Asn Lys Asp Leu Gly Ala Pro Ile Glu
 325 330 335
 Arg Thr Ile Ser Lys Pro Lys Gly Ser Val Arg Ala Pro Gln Val Tyr
 340 345 350
 Val Leu Pro Pro Pro Glu Glu Glu Met Thr Lys Lys Gln Val Thr Leu
 355 360 365
 20 Thr Cys Met Val Thr Asp Phe Met Pro Glu Asp Ile Tyr Val Glu Trp
 370 375 380
 Thr Asn Asn Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr Glu Pro Val
 385 390 395 400
 25 Leu Asp Ser Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val Glu
 405 410 415
 Lys Lys Asn Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser Val Val His
 420 425 430
 Glu Gly Leu His Asn His His Thr Thr Lys Ser Phe Ser Arg Thr Pro
 435 440 445
 30 Gly Lys
 450
 <210> 51
 <211> 218
 <212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct

<400> 51

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

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

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

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

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

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

Leu Glu Phe Pro Thr Phe Gly Gly Gly Thr Lys Leu Glu Leu Lys Arg
100 105 110

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

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

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

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

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

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

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