

SEQUENCE LISTING

<110> JUNTENDO EDUCATIONAL FOUNDATION
Meiji Seika Pharma Co. Ltd.

<120> Bispecific antibodies that bind to cleaved form of mutant CALR-CD3 , and
Pharmaceutical composition,“

<130> JUSM0030

<150>@JP 2020-143551

<151> 2020-08-27

<160> 212

<170> PatentIn version 3.5

<210> 1

<211> 13

<212> PRT

<213> Homo sapiens

<400> 1

Arg Arg Met Met Arg Thr Lys Met Arg Met Arg Arg Met
1 5 10

<210> 2

<211> 119

<212> PRT

<213> Rattus norvegicus

<400> 2

Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ser
1 5 10 15
Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30
Phe Ile His Trp Ile Lys Gln Gln Pro Gly Asn Gly Leu Glu Trp Ile
35 40 45
Gly Trp Ile Phe Pro Gly Asp Gly Asp Thr Glu Tyr Asn Gln Lys Phe
50 55 60
Asn Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80
Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys
85 90 95
Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110
Val Met Val Thr Val Ser Ser
115

<210> 3

<211> 107
 <212> PRT
 <213> Rattus norvegicus

<400> 3

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

<210> 4
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 <213> Rattus norvegicus

<400> 4

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

<210> 5
 <211> 112
 <212> PRT
 <213> Rattus norvegicus

<400> 5

Asp	Val	Val	Leu	Thr	Gln	Thr	Pro	Pro	Thr	Leu	Ser	Ala	Thr	Ile	Gly
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

1				5					10					15		
Gln	Ser	Val	Ser	Ile	Ser	Cys	Arg	Ser	Ser	Gln	Ser	Leu	Leu	Asp	Ser	
			20					25					30			
Asp	Gly	Glu	Thr	Tyr	Leu	Asn	Trp	Leu	Leu	Gln	Arg	Pro	Gly	Gln	Ser	
		35					40					45				
Pro	Gln	Leu	Leu	Ile	Tyr	Ser	Val	Ser	Asn	Leu	Glu	Ser	Gly	Val	Pro	
	50					55				60						
Asn	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Glu	Thr	Asp	Phe	Thr	Leu	Lys	Ile	
65				70				75						80		
Ser	Gly	Met	Glu	Ala	Glu	Asp	Leu	Gly	Val	Tyr	Tyr	Cys	Met	Gln	Ala	
				85				90						95		
Thr	His	Gly	Pro	Tyr	Thr	Phe	Gly	Ala	Gly	Thr	Lys	Leu	Glu	Leu	Lys	
			100					105					110			

<210> 6
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 <212> PRT
 <213> Rattus norvegicus

<400> 6

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

<210> 7
 <211> 112
 <212> PRT
 <213> Rattus norvegicus

<400> 7

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

Asn	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Glu	Thr	Asp	Phe	Thr	Leu	Lys	Ile
65					70					75					80
Ser	Gly	Val	Glu	Ala	Glu	Asp	Leu	Gly	Val	Tyr	Tyr	Cys	Met	Gln	Gly
				85					90					95	
Thr	His	Gly	Pro	Tyr	Thr	Phe	Gly	Ala	Gly	Thr	Lys	Leu	Glu	Leu	Lys
			100					105					110		

<210> 8
 <211> 119
 <212> PRT
 <213> Artificial Sequence

<400> 8

Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Gly	Gly	Val	Val	Gln	Pro	Gly	Arg
1				5					10					15	
Ser	Leu	Arg	Leu	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Tyr
			20					25					30		
Thr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Ile
		35					40					45			
Gly	Tyr	Ile	Asn	Pro	Ser	Arg	Gly	Tyr	Thr	Asn	Tyr	Asn	Gln	Lys	Val
	50					55					60				
Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	Thr	Ala	Phe
65					70					75					80
Leu	Gln	Met	Asp	Ser	Leu	Arg	Pro	Glu	Asp	Thr	Gly	Val	Tyr	Phe	Cys
				85					90					95	
Ala	Arg	Tyr	Tyr	Asp	Asp	His	Tyr	Ser	Leu	Asp	Tyr	Trp	Gly	Gln	Gly
			100					105					110		
Thr	Pro	Val	Thr	Val	Ser	Ser									
			115												

<210> 9
 <211> 107
 <212> PRT
 <213> Artificial Sequence

<400> 9

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

<210> 10
<211> 10
<212> PRT
<213> Rattus norvegicus

<400> 10

Gly Tyr Thr Phe Thr Arg Asn Phe Ile His
1 5 10

<210> 11
<211> 17
<212> PRT
<213> Rattus norvegicus

<400> 11

Trp Ile Phe Pro Gly Asp Gly Asp Thr Glu Tyr Asn Gln Lys Phe Asn
1 5 10 15
Gly

<210> 12
<211> 10
<212> PRT
<213> Rattus norvegicus

<400> 12

Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr
1 5 10

<210> 13
<211> 11
<212> PRT
<213> Rattus norvegicus

<400> 13

Leu Ala Ser Glu Asp Ile Tyr Ser Tyr Leu Ala
1 5 10

<210> 14
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<213> Rattus norvegicus

<400> 14

Ala Ala Asn Arg Leu Gln Asp
1 5

<210> 15
<211> 9

<212> PRT
<213> Rattus norvegicus

<400> 15

Leu Gln Gly Ser Lys Phe Pro Tyr Thr
1 5

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<213> Rattus norvegicus

<400> 16

Gly Tyr Thr Phe Thr Ser Tyr Phe Val His
1 5 10

<210> 17
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<212> PRT
<213> Rattus norvegicus

<400> 17

Trp Ile Tyr Pro Gly Asp Gly Asp Thr Glu Tyr Asn His Lys Phe Asn
1 5 10 15
Gly

<210> 18
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<400> 18

Gly Asn Tyr Tyr Asp Gly Arg Glu Val Met Asp Ala
1 5 10

<210> 19
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<400> 19

Arg Ser Ser Gln Ser Leu Leu Asp Ser Asp Gly Glu Thr Tyr Leu Asn
1 5 10 15

<210> 20
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<212> PRT

<213> Rattus norvegicus

<400> 20

Ser Val Ser Asn Leu Glu Ser
1 5

<210> 21

<211> 9

<212> PRT

<213> Rattus norvegicus

<400> 21

Met Gln Ala Thr His Gly Pro Tyr Thr
1 5

<210> 22

<211> 10

<212> PRT

<213> Rattus norvegicus

<400> 22

Gly Tyr Thr Phe Thr Ser Tyr Phe Val His
1 5 10

<210> 23

<211> 17

<212> PRT

<213> Rattus norvegicus

<400> 23

Trp Ile Tyr Pro Gly Asp Gly Asp Thr Glu Tyr Asn Gln Lys Phe Asn
1 5 10 15
Gly

<210> 24

<211> 12

<212> PRT

<213> Rattus norvegicus

<400> 24

Gly Asn Tyr Tyr Asp Gly Arg Glu Val Met Asp Ala
1 5 10

<210> 25

<211> 16

<212> PRT

<213> Rattus norvegicus

<400> 25

Arg	Ser	Ser	Gln	Ser	Leu	Leu	Asp	Ser	Asp	Gly	Glu	Thr	Tyr	Leu	Asn
1				5					10					15	

<210> 26

<211> 7

<212> PRT

<213> Rattus norvegicus

<400> 26

Ser	Val	Ser	Asn	Leu	Glu	Ser
1				5		

<210> 27

<211> 9

<212> PRT

<213> Rattus norvegicus

<400> 27

Met	Gln	Gly	Thr	His	Gly	Pro	Tyr	Thr
1				5				

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<212> PRT

<213> Mus musculus

<400> 28

Arg	Tyr	Thr	Met	His
1				5

<210> 29

<211> 17

<212> PRT

<213> Mus musculus

<400> 29

Tyr	Ile	Asn	Pro	Ser	Arg	Gly	Tyr	Thr	Asn	Tyr	Asn	Gln	Lys	Val	Lys
1				5					10					15	
Asp															

<210> 30

<211> 10

<212> PRT

<213> Mus musculus

<400> 30

Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr
 1 5 10

<210> 31
 <211> 10
 <212> PRT
 <213> Mus musculus

<400> 31

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn
 1 5 10

<210> 32
 <211> 7
 <212> PRT
 <213> Mus musculus

<400> 32

Asp Thr Ser Lys Leu Ala Ser
 1 5

<210> 33
 <211> 9
 <212> PRT
 <213> Mus musculus

<400> 33

Gln Gln Trp Ser Ser Asn Pro Phe Thr
 1 5

<210> 34
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 <212> PRT
 <213> Artificial Sequence

<400> 34

Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ser
 1 5 10 15
 Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
 20 25 30
 Phe Ile His Trp Ile Lys Gln Gln Pro Gly Asn Gly Leu Glu Trp Ile
 35 40 45
 Gly Trp Ile Phe Pro Gly Asp Gly Asp Thr Glu Tyr Asn Gln Lys Phe
 50 55 60
 Asn Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Thr Ala Tyr
 65 70 75 80
 Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys

				85				90					95			
Ala	Arg	Gly	Asn	Tyr	Asn	Tyr	Glu	Tyr	Phe	Asp	Tyr	Trp	Gly	Gln	Gly	
			100					105					110			
Val	Met	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	
		115					120					125				
Ser	Gly	Gly	Gly	Gly	Ser	Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ala	Ser	
	130					135					140					
Leu	Ser	Ala	Ser	Leu	Gly	Glu	Thr	Val	Ser	Ile	Glu	Cys	Leu	Ala	Ser	
145					150					155					160	
Glu	Asp	Ile	Tyr	Ser	Tyr	Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	
				165					170					175		
Ser	Pro	Gln	Leu	Leu	Ile	Phe	Ala	Ala	Asn	Arg	Leu	Gln	Asp	Gly	Val	
			180					185					190			
Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Gln	Phe	Ser	Leu	Lys	
		195					200					205				
Ile	Ser	Gly	Met	Gln	Pro	Glu	Asp	Glu	Gly	Asp	Tyr	Phe	Cys	Leu	Gln	
	210					215					220					
Gly	Ser	Lys	Phe	Pro	Tyr	Thr	Phe	Gly	Pro	Gly	Thr	Lys	Leu	Glu	Leu	
225					230					235					240	
Asn	Gly	Gly	Gly	Gly	Ser	Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Gly	Gly	
				245				250						255		
Val	Val	Gln	Pro	Gly	Arg	Ser	Leu	Arg	Leu	Ser	Cys	Lys	Ala	Ser	Gly	
			260					265					270			
Tyr	Thr	Phe	Thr	Arg	Tyr	Thr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	
		275					280					285				
Lys	Gly	Leu	Glu	Trp	Ile	Gly	Tyr	Ile	Asn	Pro	Ser	Arg	Gly	Tyr	Thr	
	290					295				300						
Asn	Tyr	Asn	Gln	Lys	Val	Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	
305					310					315					320	
Ser	Lys	Asn	Thr	Ala	Phe	Leu	Gln	Met	Asp	Ser	Leu	Arg	Pro	Glu	Asp	
				325					330					335		
Thr	Gly	Val	Tyr	Phe	Cys	Ala	Arg	Tyr	Tyr	Asp	Asp	His	Tyr	Ser	Leu	
			340					345					350			
Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Pro	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	
		355					360					365				
Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Asp	Ile	Gln	Met	
	370					375					380					
Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly	Asp	Arg	Val	Thr	
385					390					395					400	
Ile	Thr	Cys	Ser	Ala	Ser	Ser	Ser	Val	Ser	Tyr	Met	Asn	Trp	Tyr	Gln	
				405					410					415		
Gln	Thr	Pro	Gly	Lys	Ala	Pro	Lys	Arg	Trp	Ile	Tyr	Asp	Thr	Ser	Lys	
			420					425					430			
Leu	Ala	Ser	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	
		435					440					445				
Asp	Tyr	Thr	Phe	Thr	Ile	Ser	Ser	Leu	Gln	Pro	Glu	Asp	Ile	Ala	Thr	
	450					455					460					
Tyr	Tyr	Cys	Gln	Gln	Trp	Ser	Ser	Asn	Pro	Phe	Thr	Phe	Gly	Gln	Gly	
465					470					475					480	
Thr	Lys	Leu	Gln	Ile	Thr	Arg	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	
				485					490					495		
Pro	Ala	Pro	Glu	Ala	Ala	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	
			500					505					510			

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

<210> 35

<211> 722

<212> PRT

<213> Artificial Sequence

<400> 35

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

145					150					155					160
Gln	Gln	Pro	Gly	Asn	Gly	Leu	Glu	Trp	Ile	Gly	Trp	Ile	Phe	Pro	Gly
				165					170					175	
Asp	Gly	Asp	Thr	Glu	Tyr	Asn	Gln	Lys	Phe	Asn	Gly	Lys	Ala	Thr	Leu
			180					185					190		
Thr	Ala	Asp	Lys	Ser	Ser	Ser	Thr	Ala	Tyr	Met	Gln	Leu	Ser	Ser	Leu
		195					200					205			
Thr	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Phe	Cys	Ala	Arg	Gly	Asn	Tyr	Asn
	210					215					220				
Tyr	Glu	Tyr	Phe	Asp	Tyr	Trp	Gly	Gln	Gly	Val	Met	Val	Thr	Val	Ser
225					230					235					240
Ser	Gly	Gly	Gly	Gly	Ser	Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Gly	Gly
				245					250					255	
Val	Val	Gln	Pro	Gly	Arg	Ser	Leu	Arg	Leu	Ser	Cys	Lys	Ala	Ser	Gly
			260					265					270		
Tyr	Thr	Phe	Thr	Arg	Tyr	Thr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly
		275					280					285			
Lys	Gly	Leu	Glu	Trp	Ile	Gly	Tyr	Ile	Asn	Pro	Ser	Arg	Gly	Tyr	Thr
	290					295					300				
Asn	Tyr	Asn	Gln	Lys	Val	Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn
305					310					315					320
Ser	Lys	Asn	Thr	Ala	Phe	Leu	Gln	Met	Asp	Ser	Leu	Arg	Pro	Glu	Asp
				325					330					335	
Thr	Gly	Val	Tyr	Phe	Cys	Ala	Arg	Tyr	Tyr	Asp	Asp	His	Tyr	Ser	Leu
			340					345					350		
Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Pro	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly
		355					360					365			
Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Asp	Ile	Gln	Met
	370					375					380				
Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly	Asp	Arg	Val	Thr
385					390					395					400
Ile	Thr	Cys	Ser	Ala	Ser	Ser	Ser	Val	Ser	Tyr	Met	Asn	Trp	Tyr	Gln
				405					410					415	
Gln	Thr	Pro	Gly	Lys	Ala	Pro	Lys	Arg	Trp	Ile	Tyr	Asp	Thr	Ser	Lys
			420					425					430		
Leu	Ala	Ser	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr
		435					440					445			
Asp	Tyr	Thr	Phe	Thr	Ile	Ser	Ser	Leu	Gln	Pro	Glu	Asp	Ile	Ala	Thr
	450					455					460				
Tyr	Tyr	Cys	Gln	Gln	Trp	Ser	Ser	Asn	Pro	Phe	Thr	Phe	Gly	Gln	Gly
465					470				475						480
Thr	Lys	Leu	Gln	Ile	Thr	Arg	Leu	Glu	Val	Leu	Phe	Gln	Gly	Pro	Asp
				485					490					495	
Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Leu	Leu	Gly	Gly
			500					505					510		
Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile
		515					520					525			
Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val	Ser	His	Glu
	530					535					540				
Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His
545					550					555					560
Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg
				565					570					575	

Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu	Asn	Gly	Lys
			580					585					590		
Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu
		595					600					605			
Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr
	610					615					620				
Thr	Leu	Pro	Pro	Ser	Arg	Asp	Glu	Leu	Thr	Lys	Asn	Gln	Val	Ser	Leu
625					630					635					640
Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp
				645					650					655	
Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val
			660					665					670		
Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp
		675					680					685			
Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val	Met	His
	690					695					700				
Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	Leu	Ser	Pro
705					710					715					720
Gly	Lys														

<210> 36
 <211> 714
 <212> PRT
 <213> Artificial Sequence

<400> 36

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

Leu	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr
625					630					635					640
Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn
				645					650						655
Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe
			660					665					670		
Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn
		675					680					685			
Val	Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr
	690					695					700				
Gln	Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly	Lys						
705					710										

<210> 37

<211> 714

<212> PRT

<213> Artificial Sequence

<400> 37

Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Gly	Gly	Val	Val	Gln	Pro	Gly	Arg
1				5					10					15	
Ser	Leu	Arg	Leu	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Tyr
			20					25					30		
Thr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Ile
		35				40						45			
Gly	Tyr	Ile	Asn	Pro	Ser	Arg	Gly	Tyr	Thr	Asn	Tyr	Asn	Gln	Lys	Val
	50					55				60					
Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	Thr	Ala	Phe
	65				70				75						80
Leu	Gln	Met	Asp	Ser	Leu	Arg	Pro	Glu	Asp	Thr	Gly	Val	Tyr	Phe	Cys
				85					90					95	
Ala	Arg	Tyr	Tyr	Asp	Asp	His	Tyr	Ser	Leu	Asp	Tyr	Trp	Gly	Gln	Gly
			100					105					110		
Thr	Pro	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly
		115					120					125			
Ser	Gly	Gly	Gly	Gly	Ser	Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Ser
	130					135					140				
Leu	Ser	Ala	Ser	Val	Gly	Asp	Arg	Val	Thr	Ile	Thr	Cys	Ser	Ala	Ser
	145				150				155						160
Ser	Ser	Val	Ser	Tyr	Met	Asn	Trp	Tyr	Gln	Gln	Thr	Pro	Gly	Lys	Ala
				165					170					175	
Pro	Lys	Arg	Trp	Ile	Tyr	Asp	Thr	Ser	Lys	Leu	Ala	Ser	Gly	Val	Pro
			180					185					190		
Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Thr	Phe	Thr	Ile
		195				200						205			
Ser	Ser	Leu	Gln	Pro	Glu	Asp	Ile	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	Trp
	210					215					220				
Ser	Ser	Asn	Pro	Phe	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Gln	Ile	Thr
	225				230					235					240
Arg	Gly	Gly	Gly	Gly	Ser	Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ala	Ser
				245					250					255	
Leu	Ser	Ala	Ser	Leu	Gly	Glu	Thr	Val	Ser	Ile	Glu	Cys	Leu	Ala	Ser

			260					265				270				
Glu	Asp	Ile	Tyr	Ser	Tyr	Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	
		275					280					285				
Ser	Pro	Gln	Leu	Leu	Ile	Phe	Ala	Ala	Asn	Arg	Leu	Gln	Asp	Gly	Val	
	290					295					300					
Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Gln	Phe	Ser	Leu	Lys	
305					310					315					320	
Ile	Ser	Gly	Met	Gln	Pro	Glu	Asp	Glu	Gly	Asp	Tyr	Phe	Cys	Leu	Gln	
			325						330					335		
Gly	Ser	Lys	Phe	Pro	Tyr	Thr	Phe	Gly	Pro	Gly	Thr	Lys	Leu	Glu	Leu	
			340					345					350			
Asn	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	
	355						360					365				
Gln	Val	Gln	Leu	Gln	Gln	Ser	Gly	Ala	Glu	Leu	Val	Lys	Pro	Gly	Ser	
	370					375					380					
Ser	Val	Lys	Ile	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Asn	
385					390					395					400	
Phe	Ile	His	Trp	Ile	Lys	Gln	Gln	Pro	Gly	Asn	Gly	Leu	Glu	Trp	Ile	
			405						410					415		
Gly	Trp	Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr	Glu	Tyr	Asn	Gln	Lys	Phe	
			420					425					430			
Asn	Gly	Lys	Ala	Thr	Leu	Thr	Ala	Asp	Lys	Ser	Ser	Ser	Thr	Ala	Tyr	
	435						440					445				
Met	Gln	Leu	Ser	Ser	Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Phe	Cys	
	450					455				460						
Ala	Arg	Gly	Asn	Tyr	Asn	Tyr	Glu	Tyr	Phe	Asp	Tyr	Trp	Gly	Gln	Gly	
465					470					475					480	
Val	Met	Val	Thr	Val	Ser	Ser	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	
			485					490						495		
Pro	Ala	Pro	Glu	Ala	Ala	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	
		500						505					510			
Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	
	515						520					525				
Val	Val	Val	Asp	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	
	530					535					540					
Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	
545					550					555					560	
Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	
			565					570						575		
His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	
		580						585					590			
Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	
	595						600					605				
Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Asp	Glu	
	610				615						620					
Leu	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	
625					630					635					640	
Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	
			645					650						655		
Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	
		660						665					670			
Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	
	675						680					685				

Val	Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr
690						695					700				
Gln	Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly	Lys						
705					710										

<210> 38
 <211> 717
 <212> PRT
 <213> Artificial Sequence

<400> 38

Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Gly	Gly	Val	Val	Gln	Pro	Gly	Arg
1				5				10						15	
Ser	Leu	Arg	Leu	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Tyr
			20					25					30		
Thr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Ile
		35					40					45			
Gly	Tyr	Ile	Asn	Pro	Ser	Arg	Gly	Tyr	Thr	Asn	Tyr	Asn	Gln	Lys	Val
	50					55				60					
Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	Thr	Ala	Phe
65					70					75					80
Leu	Gln	Met	Asp	Ser	Leu	Arg	Pro	Glu	Asp	Thr	Gly	Val	Tyr	Phe	Cys
			85						90					95	
Ala	Arg	Tyr	Tyr	Asp	Asp	His	Tyr	Ser	Leu	Asp	Tyr	Trp	Gly	Gln	Gly
			100					105					110		
Thr	Pro	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Asp	Ile	Gln	Met
		115					120					125			
Thr	Gln	Ser	Pro	Ala	Ser	Leu	Ser	Ala	Ser	Leu	Gly	Glu	Thr	Val	Ser
	130					135					140				
Ile	Glu	Cys	Leu	Ala	Ser	Glu	Asp	Ile	Tyr	Ser	Tyr	Leu	Ala	Trp	Tyr
145					150					155					160
Gln	Gln	Lys	Pro	Gly	Lys	Ser	Pro	Gln	Leu	Leu	Ile	Phe	Ala	Ala	Asn
			165					170						175	
Arg	Leu	Gln	Asp	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly
			180					185					190		
Thr	Gln	Phe	Ser	Leu	Lys	Ile	Ser	Gly	Met	Gln	Pro	Glu	Asp	Glu	Gly
		195					200					205			
Asp	Tyr	Phe	Cys	Leu	Gln	Gly	Ser	Lys	Phe	Pro	Tyr	Thr	Phe	Gly	Pro
	210					215					220				
Gly	Thr	Lys	Leu	Glu	Leu	Asn	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly
225					230					235					240
Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gln	Val	Gln	Leu	Gln
				245					250					255	
Gln	Ser	Gly	Ala	Glu	Leu	Val	Lys	Pro	Gly	Ser	Ser	Val	Lys	Ile	Ser
			260					265					270		
Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Asn	Phe	Ile	His	Trp	Ile
		275					280					285			
Lys	Gln	Gln	Pro	Gly	Asn	Gly	Leu	Glu	Trp	Ile	Gly	Trp	Ile	Phe	Pro
	290					295					300				
Gly	Asp	Gly	Asp	Thr	Glu	Tyr	Asn	Gln	Lys	Phe	Asn	Gly	Lys	Ala	Thr
305					310					315					320
Leu	Thr	Ala	Asp	Lys	Ser	Ser	Ser	Thr	Ala	Tyr	Met	Gln	Leu	Ser	Ser

				325					330					335			
Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Phe	Cys	Ala	Arg	Gly	Asn	Tyr		
			340						345				350				
Asn	Tyr	Glu	Tyr	Phe	Asp	Tyr	Trp	Gly	Gln	Gly	Val	Met	Val	Thr	Val		
		355					360					365					
Ser	Ser	Gly	Gly	Gly	Gly	Ser	Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser		
	370					375					380						
Ser	Leu	Ser	Ala	Ser	Val	Gly	Asp	Arg	Val	Thr	Ile	Thr	Cys	Ser	Ala		
385					390					395					400		
Ser	Ser	Ser	Val	Ser	Tyr	Met	Asn	Trp	Tyr	Gln	Gln	Thr	Pro	Gly	Lys		
			405						410					415			
Ala	Pro	Lys	Arg	Trp	Ile	Tyr	Asp	Thr	Ser	Lys	Leu	Ala	Ser	Gly	Val		
			420					425					430				
Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Thr	Phe	Thr		
		435				440						445					
Ile	Ser	Ser	Leu	Gln	Pro	Glu	Asp	Ile	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln		
	450					455					460						
Trp	Ser	Ser	Asn	Pro	Phe	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Gln	Ile		
465					470				475						480		
Thr	Arg	Leu	Glu	Val	Leu	Phe	Gln	Gly	Pro	Asp	Lys	Thr	His	Thr	Cys		
			485					490						495			
Pro	Pro	Cys	Pro	Ala	Pro	Glu	Ala	Ala	Gly	Gly	Pro	Ser	Val	Phe	Leu		
			500					505					510				
Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu		
		515					520					525					
Val	Thr	Cys	Val	Val	Val	Asp	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys		
	530					535					540						
Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys		
545					550					555					560		
Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu		
				565					570					575			
Thr	Val	Leu	His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys		
			580					585					590				
Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys		
		595					600					605					
Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser		
	610					615					620						
Arg	Asp	Glu	Leu	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys		
625					630					635					640		
Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln		
			645						650					655			
Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly		
			660					665					670				
Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln		
		675					680					685					
Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn		
	690					695					700						
His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly	Lys					
705					710					715							

<210> 39
 <211> 709
 <212> PRT

<213> Artificial Sequence

<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 Ser Ala Ser Ser Ser Val Ser Tyr Met
20 25 30
Asn Trp Tyr Gln Gln Thr Pro Gly Lys Ala Pro Lys Arg Trp Ile Tyr
35 40 45
Asp Thr Ser Lys Leu Ala Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
50 55 60
Gly Ser Gly Thr Asp Tyr Thr Phe Thr Ile Ser Ser Leu Gln Pro Glu
65 70 75 80
Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Phe Thr
85 90 95
Phe Gly Gln Gly Thr Lys Leu Gln Ile Thr Arg Gly Gly Gly Gly Ser
100 105 110
Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ser
115 120 125
Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
130 135 140
Phe Ile His Trp Ile Lys Gln Gln Pro Gly Asn Gly Leu Glu Trp Ile
145 150 155 160
Gly Trp Ile Phe Pro Gly Asp Gly Asp Thr Glu Tyr Asn Gln Lys Phe
165 170 175
Asn Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr
180 185 190
Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys
195 200 205
Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
210 215 220
Val Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
225 230 235 240
Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr
245 250 255
Gln Ser Pro Ala Ser Leu Ser Ala Ser Leu Gly Glu Thr Val Ser Ile
260 265 270
Glu Cys Leu Ala Ser Glu Asp Ile Tyr Ser Tyr Leu Ala Trp Tyr Gln
275 280 285
Gln Lys Pro Gly Lys Ser Pro Gln Leu Leu Ile Phe Ala Ala Asn Arg
290 295 300
Leu Gln Asp Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr
305 310 315 320
Gln Phe Ser Leu Lys Ile Ser Gly Met Gln Pro Glu Asp Glu Gly Asp
325 330 335
Tyr Phe Cys Leu Gln Gly Ser Lys Phe Pro Tyr Thr Phe Gly Pro Gly
340 345 350
Thr Lys Leu Glu Leu Asn Gly Gly Gly Gly Ser Gln Val Gln Leu Val
355 360 365
Gln Ser Gly Gly Gly Val Val Gln Pro Gly Arg Ser Leu Arg Leu Ser
370 375 380
Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp Val

385					390					395					400
Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Ile	Gly	Tyr	Ile	Asn	Pro
				405					410					415	
Ser	Arg	Gly	Tyr	Thr	Asn	Tyr	Asn	Gln	Lys	Val	Lys	Asp	Arg	Phe	Thr
			420					425					430		
Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	Thr	Ala	Phe	Leu	Gln	Met	Asp	Ser
		435					440					445			
Leu	Arg	Pro	Glu	Asp	Thr	Gly	Val	Tyr	Phe	Cys	Ala	Arg	Tyr	Tyr	Asp
	450					455					460				
Asp	His	Tyr	Ser	Leu	Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Pro	Val	Thr	Val
465					470				475						480
Ser	Ser	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Ala
				485				490						495	
Ala	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr
			500					505					510		
Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val
	515						520					525			
Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val
	530					535					540				
Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser
545					550					555					560
Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu
				565					570					575	
Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala
			580					585					590		
Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro
	595						600					605			
Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Asp	Glu	Leu	Thr	Lys	Asn	Gln
	610					615					620				
Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala
625					630					635					640
Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr
				645					650					655	
Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu
			660				665						670		
Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser
		675					680					685			
Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser
	690					695					700				
Leu	Ser	Pro	Gly	Lys											
705															

<210> 40
 <211> 709
 <212> PRT
 <213> Artificial Sequence

<400> 40

Gln	Val	Gln	Leu	Gln	Gln	Ser	Gly	Ala	Glu	Leu	Val	Lys	Pro	Gly	Ser
1				5					10					15	
Ser	Val	Lys	Ile	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Asn
			20					25					30		

Phe	Ile	His	Trp	Ile	Lys	Gln	Gln	Pro	Gly	Asn	Gly	Leu	Glu	Trp	Ile		
		35					40					45					
Gly	Trp	Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr	Glu	Tyr	Asn	Gln	Lys	Phe		
	50					55					60						
Asn	Gly	Lys	Ala	Thr	Leu	Thr	Ala	Asp	Lys	Ser	Ser	Ser	Thr	Ala	Tyr		
	65				70					75					80		
Met	Gln	Leu	Ser	Ser	Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Phe	Cys		
			85						90					95			
Ala	Arg	Gly	Asn	Tyr	Asn	Tyr	Glu	Tyr	Phe	Asp	Tyr	Trp	Gly	Gln	Gly		
			100					105					110				
Val	Met	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Asp	Ile	Gln	Met		
		115					120					125					
Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly	Asp	Arg	Val	Thr		
						135						140					
Ile	Thr	Cys	Ser	Ala	Ser	Ser	Ser	Val	Ser	Tyr	Met	Asn	Trp	Tyr	Gln		
	145				150					155					160		
Gln	Thr	Pro	Gly	Lys	Ala	Pro	Lys	Arg	Trp	Ile	Tyr	Asp	Thr	Ser	Lys		
				165					170					175			
Leu	Ala	Ser	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr		
			180					185					190				
Asp	Tyr	Thr	Phe	Thr	Ile	Ser	Ser	Leu	Gln	Pro	Glu	Asp	Ile	Ala	Thr		
		195					200					205					
Tyr	Tyr	Cys	Gln	Gln	Trp	Ser	Ser	Asn	Pro	Phe	Thr	Phe	Gly	Gln	Gly		
	210					215					220						
Thr	Lys	Leu	Gln	Ile	Thr	Arg	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly		
	225				230					235					240		
Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gln	Val	Gln	Leu	Val		
				245					250					255			
Gln	Ser	Gly	Gly	Gly	Val	Val	Gln	Pro	Gly	Arg	Ser	Leu	Arg	Leu	Ser		
			260					265					270				
Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Tyr	Thr	Met	His	Trp	Val		
		275					280					285					
Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Ile	Gly	Tyr	Ile	Asn	Pro		
						295					300						
Ser	Arg	Gly	Tyr	Thr	Asn	Tyr	Asn	Gln	Lys	Val	Lys	Asp	Arg	Phe	Thr		
					310					315					320		
Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	Thr	Ala	Phe	Leu	Gln	Met	Asp	Ser		
				325					330					335			
Leu	Arg	Pro	Glu	Asp	Thr	Gly	Val	Tyr	Phe	Cys	Ala	Arg	Tyr	Tyr	Asp		
			340					345					350				
Asp	His	Tyr	Ser	Leu	Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Pro	Val	Thr	Val		
		355					360					365					
Ser	Ser	Gly	Gly	Gly	Gly	Ser	Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ala		
						375					380						
Ser	Leu	Ser	Ala	Ser	Leu	Gly	Glu	Thr	Val	Ser	Ile	Glu	Cys	Leu	Ala		
					390					395					400		
Ser	Glu	Asp	Ile	Tyr	Ser	Tyr	Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly		
				405					410					415			
Lys	Ser	Pro	Gln	Leu	Leu	Ile	Phe	Ala	Ala	Asn	Arg	Leu	Gln	Asp	Gly		
			420					425					430				
Val	Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Gln	Phe	Ser	Leu		
		435					440					445					
Lys	Ile	Ser	Gly	Met	Gln	Pro	Glu	Asp	Glu	Gly	Asp	Tyr	Phe	Cys	Leu		

450		455		460
Gln Gly Ser Lys Phe Pro Tyr Thr Phe Gly Pro Gly Thr Lys Leu Glu				
465		470		475
Leu Asn Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala				
	485		490	495
Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr				
	500		505	510
Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val				
	515		520	525
Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val				
	530		535	540
Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser				
545		550		555
Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu				
	565		570	575
Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala				
	580		585	590
Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro				
	595		600	605
Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln				
610		615		620
Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala				
625		630		635
Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr				
	645		650	655
Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu				
	660		665	670
Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser				
	675		680	685
Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser				
690		695		700
Leu Ser Pro Gly Lys				
705				

<210> 41
 <211> 717
 <212> PRT
 <213> Artificial Sequence

<400> 41

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

Thr	Phe	Gly	Pro	Gly	Thr	Lys	Leu	Glu	Leu	Asn	Gly	Gly	Gly	Gly	Ser	
			100					105					110			
Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Gly	Gly	Val	Val	Gln	Pro	Gly	Arg	
		115					120					125				
Ser	Leu	Arg	Leu	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Tyr	
	130					135					140					
Thr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Ile	
145					150					155					160	
Gly	Tyr	Ile	Asn	Pro	Ser	Arg	Gly	Tyr	Thr	Asn	Tyr	Asn	Gln	Lys	Val	
			165						170					175		
Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	Thr	Ala	Phe	
			180					185					190			
Leu	Gln	Met	Asp	Ser	Leu	Arg	Pro	Glu	Asp	Thr	Gly	Val	Tyr	Phe	Cys	
		195					200					205				
Ala	Arg	Tyr	Tyr	Asp	Asp	His	Tyr	Ser	Leu	Asp	Tyr	Trp	Gly	Gln	Gly	
	210					215					220					
Thr	Pro	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	
225					230					235					240	
Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Asp	Ile	Gln	Met	Thr	
				245					250					255		
Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly	Asp	Arg	Val	Thr	Ile	
			260					265					270			
Thr	Cys	Ser	Ala	Ser	Ser	Ser	Val	Ser	Tyr	Met	Asn	Trp	Tyr	Gln	Gln	
	275						280					285				
Thr	Pro	Gly	Lys	Ala	Pro	Lys	Arg	Trp	Ile	Tyr	Asp	Thr	Ser	Lys	Leu	
	290					295					300					
Ala	Ser	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	
305					310					315					320	
Tyr	Thr	Phe	Thr	Ile	Ser	Ser	Leu	Gln	Pro	Glu	Asp	Ile	Ala	Thr	Tyr	
				325					330					335		
Tyr	Cys	Gln	Gln	Trp	Ser	Ser	Asn	Pro	Phe	Thr	Phe	Gly	Gln	Gly	Thr	
			340					345					350			
Lys	Leu	Gln	Ile	Thr	Arg	Gly	Gly	Gly	Gly	Ser	Gln	Val	Gln	Leu	Gln	
		355					360					365				
Gln	Ser	Gly	Ala	Glu	Leu	Val	Lys	Pro	Gly	Ser	Ser	Val	Lys	Ile	Ser	
					375						380					
Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Asn	Phe	Ile	His	Trp	Ile	
385					390					395					400	
Lys	Gln	Gln	Pro	Gly	Asn	Gly	Leu	Glu	Trp	Ile	Gly	Trp	Ile	Phe	Pro	
				405					410					415		
Gly	Asp	Gly	Asp	Thr	Glu	Tyr	Asn	Gln	Lys	Phe	Asn	Gly	Lys	Ala	Thr	
			420					425					430			
Leu	Thr	Ala	Asp	Lys	Ser	Ser	Ser	Thr	Ala	Tyr	Met	Gln	Leu	Ser	Ser	
		435					440					445				
Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Phe	Cys	Ala	Arg	Gly	Asn	Tyr	
					455						460					
Asn	Tyr	Glu	Tyr	Phe	Asp	Tyr	Trp	Gly	Gln	Gly	Val	Met	Val	Thr	Val	
465					470					475					480	
Ser	Ser	Leu	Glu	Val	Leu	Phe	Gln	Gly	Pro	Asp	Lys	Thr	His	Thr	Cys	
				485					490					495		
Pro	Pro	Cys	Pro	Ala	Pro	Glu	Ala	Ala	Gly	Gly	Pro	Ser	Val	Phe	Leu	
			500					505					510			
Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	

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

<210> 42

<211> 493

<212> PRT

<213> Artificial Sequence

<400> 42

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

Glu	Asp	Ile	Tyr	Ser	Tyr	Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	
				165					170					175		
Ser	Pro	Gln	Leu	Leu	Ile	Phe	Ala	Ala	Asn	Arg	Leu	Gln	Asp	Gly	Val	
			180					185					190			
Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Gln	Phe	Ser	Leu	Lys	
		195					200					205				
Ile	Ser	Gly	Met	Gln	Pro	Glu	Asp	Glu	Gly	Asp	Tyr	Phe	Cys	Leu	Gln	
	210					215					220					
Gly	Ser	Lys	Phe	Pro	Tyr	Thr	Phe	Gly	Pro	Gly	Thr	Lys	Leu	Glu	Leu	
225					230					235					240	
Asn	Gly	Gly	Gly	Gly	Ser	Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Gly	Gly	
				245					250					255		
Val	Val	Gln	Pro	Gly	Arg	Ser	Leu	Arg	Leu	Ser	Cys	Lys	Ala	Ser	Gly	
			260					265					270			
Tyr	Thr	Phe	Thr	Arg	Tyr	Thr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	
		275					280					285				
Lys	Gly	Leu	Glu	Trp	Ile	Gly	Tyr	Ile	Asn	Pro	Ser	Arg	Gly	Tyr	Thr	
	290					295					300					
Asn	Tyr	Asn	Gln	Lys	Val	Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	
305					310					315					320	
Ser	Lys	Asn	Thr	Ala	Phe	Leu	Gln	Met	Asp	Ser	Leu	Arg	Pro	Glu	Asp	
				325					330					335		
Thr	Gly	Val	Tyr	Phe	Cys	Ala	Arg	Tyr	Asp	Asp	His	Tyr	Ser	Leu		
			340					345				350				
Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Pro	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	
		355					360					365				
Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Asp	Ile	Gln	Met	
	370					375					380					
Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly	Asp	Arg	Val	Thr	
385					390					395					400	
Ile	Thr	Cys	Ser	Ala	Ser	Ser	Ser	Val	Ser	Tyr	Met	Asn	Trp	Tyr	Gln	
				405					410					415		
Gln	Thr	Pro	Gly	Lys	Ala	Pro	Lys	Arg	Trp	Ile	Tyr	Asp	Thr	Ser	Lys	
			420					425					430			
Leu	Ala	Ser	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	
	435						440					445				
Asp	Tyr	Thr	Phe	Thr	Ile	Ser	Ser	Leu	Gln	Pro	Glu	Asp	Ile	Ala	Thr	
	450					455					460					
Tyr	Tyr	Cys	Gln	Gln	Trp	Ser	Ser	Asn	Pro	Phe	Thr	Phe	Gly	Gln	Gly	
465					470				475						480	
Thr	Lys	Leu	Gln	Ile	Thr	Arg	His	His	His	His	His	His				
				485					490							

<210> 43
 <211> 493
 <212> PRT
 <213> Artificial Sequence

<400> 43

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

			20					25				30				
Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ser	Pro	Gln	Leu	Leu	Ile	
		35					40					45				
Phe	Ala	Ala	Asn	Arg	Leu	Gln	Asp	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly	
	50					55					60					
Ser	Gly	Ser	Gly	Thr	Gln	Phe	Ser	Leu	Lys	Ile	Ser	Gly	Met	Gln	Pro	
65					70					75					80	
Glu	Asp	Glu	Gly	Asp	Tyr	Phe	Cys	Leu	Gln	Gly	Ser	Lys	Phe	Pro	Tyr	
				85					90					95		
Thr	Phe	Gly	Pro	Gly	Thr	Lys	Leu	Glu	Leu	Asn	Gly	Gly	Gly	Gly	Ser	
			100					105					110			
Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gln	Val	Gln	Leu	Gln	Gln	
		115					120					125				
Ser	Gly	Ala	Glu	Leu	Val	Lys	Pro	Gly	Ser	Ser	Val	Lys	Ile	Ser	Cys	
	130					135					140					
Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Asn	Phe	Ile	His	Trp	Ile	Lys	
145					150					155					160	
Gln	Gln	Pro	Gly	Asn	Gly	Leu	Glu	Trp	Ile	Gly	Trp	Ile	Phe	Pro	Gly	
				165					170					175		
Asp	Gly	Asp	Thr	Glu	Tyr	Asn	Gln	Lys	Phe	Asn	Gly	Lys	Ala	Thr	Leu	
			180					185					190			
Thr	Ala	Asp	Lys	Ser	Ser	Ser	Thr	Ala	Tyr	Met	Gln	Leu	Ser	Ser	Leu	
		195					200					205				
Thr	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Phe	Cys	Ala	Arg	Gly	Asn	Tyr	Asn	
	210					215					220					
Tyr	Glu	Tyr	Phe	Asp	Tyr	Trp	Gly	Gln	Gly	Val	Met	Val	Thr	Val	Ser	
225					230					235					240	
Ser	Gly	Gly	Gly	Gly	Ser	Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Gly	Gly	
				245				250					255			
Val	Val	Gln	Pro	Gly	Arg	Ser	Leu	Arg	Leu	Ser	Cys	Lys	Ala	Ser	Gly	
			260					265					270			
Tyr	Thr	Phe	Thr	Arg	Tyr	Thr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	
		275					280					285				
Lys	Gly	Leu	Glu	Trp	Ile	Gly	Tyr	Ile	Asn	Pro	Ser	Arg	Gly	Tyr	Thr	
	290					295					300					
Asn	Tyr	Asn	Gln	Lys	Val	Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	
305					310					315					320	
Ser	Lys	Asn	Thr	Ala	Phe	Leu	Gln	Met	Asp	Ser	Leu	Arg	Pro	Glu	Asp	
				325					330					335		
Thr	Gly	Val	Tyr	Phe	Cys	Ala	Arg	Tyr	Tyr	Asp	Asp	His	Tyr	Ser	Leu	
			340					345					350			
Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Pro	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	
		355					360					365				
Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Asp	Ile	Gln	Met	
	370					375					380					
Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly	Asp	Arg	Val	Thr	
385					390					395					400	
Ile	Thr	Cys	Ser	Ala	Ser	Ser	Ser	Val	Ser	Tyr	Met	Asn	Trp	Tyr	Gln	
				405					410					415		
Gln	Thr	Pro	Gly	Lys	Ala	Pro	Lys	Arg	Trp	Ile	Tyr	Asp	Thr	Ser	Lys	
		420						425					430			
Leu	Ala	Ser	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	
		435					440					445				

Asp	Tyr	Thr	Phe	Thr	Ile	Ser	Ser	Leu	Gln	Pro	Glu	Asp	Ile	Ala	Thr
450						455					460				
Tyr	Tyr	Cys	Gln	Gln	Trp	Ser	Ser	Asn	Pro	Phe	Thr	Phe	Gly	Gln	Gly
465					470					475					480
Thr	Lys	Leu	Gln	Ile	Thr	Arg	His	His	His	His	His	His			
				485					490						

<210> 44
 <211> 493
 <212> PRT
 <213> Artificial Sequence

<400> 44

Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Gly	Gly	Val	Val	Gln	Pro	Gly	Arg
1				5				10						15	
Ser	Leu	Arg	Leu	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Tyr
			20					25					30		
Thr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Ile
		35					40					45			
Gly	Tyr	Ile	Asn	Pro	Ser	Arg	Gly	Tyr	Thr	Asn	Tyr	Asn	Gln	Lys	Val
	50					55				60					
Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	Thr	Ala	Phe
65					70				75						80
Leu	Gln	Met	Asp	Ser	Leu	Arg	Pro	Glu	Asp	Thr	Gly	Val	Tyr	Phe	Cys
				85					90					95	
Ala	Arg	Tyr	Tyr	Asp	Asp	His	Tyr	Ser	Leu	Asp	Tyr	Trp	Gly	Gln	Gly
			100					105					110		
Thr	Pro	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly
		115					120					125			
Ser	Gly	Gly	Gly	Gly	Ser	Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Ser
	130					135					140				
Leu	Ser	Ala	Ser	Val	Gly	Asp	Arg	Val	Thr	Ile	Thr	Cys	Ser	Ala	Ser
145					150					155					160
Ser	Ser	Val	Ser	Tyr	Met	Asn	Trp	Tyr	Gln	Gln	Thr	Pro	Gly	Lys	Ala
				165					170					175	
Pro	Lys	Arg	Trp	Ile	Tyr	Asp	Thr	Ser	Lys	Leu	Ala	Ser	Gly	Val	Pro
		180						185					190		
Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Thr	Phe	Thr	Ile
	195					200					205				
Ser	Ser	Leu	Gln	Pro	Glu	Asp	Ile	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	Trp
	210					215					220				
Ser	Ser	Asn	Pro	Phe	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Gln	Ile	Thr
225					230					235					240
Arg	Gly	Gly	Gly	Gly	Ser	Gln	Val	Gln	Leu	Gln	Gln	Ser	Gly	Ala	Glu
				245					250					255	
Leu	Val	Lys	Pro	Gly	Ser	Ser	Val	Lys	Ile	Ser	Cys	Lys	Ala	Ser	Gly
			260					265					270		
Tyr	Thr	Phe	Thr	Arg	Asn	Phe	Ile	His	Trp	Ile	Lys	Gln	Gln	Pro	Gly
		275					280					285			
Asn	Gly	Leu	Glu	Trp	Ile	Gly	Trp	Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr
	290					295					300				
Glu	Tyr	Asn	Gln	Lys	Phe	Asn	Gly	Lys	Ala	Thr	Leu	Thr	Ala	Asp	Lys

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

<210> 45
 <211> 493
 <212> PRT
 <213> Artificial Sequence

<400> 45

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

Pro	Lys	Arg	Trp	Ile	Tyr	Asp	Thr	Ser	Lys	Leu	Ala	Ser	Gly	Val	Pro	180	185	190
Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Thr	Phe	Thr	Ile	195	200	205
Ser	Ser	Leu	Gln	Pro	Glu	Asp	Ile	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	Trp	210	215	220
Ser	Ser	Asn	Pro	Phe	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Gln	Ile	Thr	225	230	235
Arg	Gly	Gly	Gly	Gly	Ser	Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ala	Ser	245	250	255
Leu	Ser	Ala	Ser	Leu	Gly	Glu	Thr	Val	Ser	Ile	Glu	Cys	Leu	Ala	Ser	260	265	270
Glu	Asp	Ile	Tyr	Ser	Tyr	Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	275	280	285
Ser	Pro	Gln	Leu	Leu	Ile	Phe	Ala	Ala	Asn	Arg	Leu	Gln	Asp	Gly	Val	290	295	300
Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Gln	Phe	Ser	Leu	Lys	305	310	315
Ile	Ser	Gly	Met	Gln	Pro	Glu	Asp	Glu	Gly	Asp	Tyr	Phe	Cys	Leu	Gln	325	330	335
Gly	Ser	Lys	Phe	Pro	Tyr	Thr	Phe	Gly	Pro	Gly	Thr	Lys	Leu	Glu	Leu	340	345	350
Asn	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	355	360	365
Gln	Val	Gln	Leu	Gln	Gln	Ser	Gly	Ala	Glu	Leu	Val	Lys	Pro	Gly	Ser	370	375	380
Ser	Val	Lys	Ile	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Asn	385	390	395
Phe	Ile	His	Trp	Ile	Lys	Gln	Gln	Pro	Gly	Asn	Gly	Leu	Glu	Trp	Ile	405	410	415
Gly	Trp	Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr	Glu	Tyr	Asn	Gln	Lys	Phe	420	425	430
Asn	Gly	Lys	Ala	Thr	Leu	Thr	Ala	Asp	Lys	Ser	Ser	Ser	Thr	Ala	Tyr	435	440	445
Met	Gln	Leu	Ser	Ser	Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Phe	Cys	450	455	460
Ala	Arg	Gly	Asn	Tyr	Asn	Tyr	Glu	Tyr	Phe	Asp	Tyr	Trp	Gly	Gln	Gly	465	470	475
Val	Met	Val	Thr	Val	Ser	Ser	His	His	His	His	His	His	His			485	490	

<210> 46
 <211> 449
 <212> PRT
 <213> Artificial Sequence

<400> 46

Gln	Val	Gln	Leu	Gln	Gln	Ser	Gly	Ala	Glu	Leu	Val	Lys	Pro	Gly	Ser	1	5	10	15
Ser	Val	Lys	Ile	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Asn	20	25	30	
Phe	Ile	His	Trp	Ile	Lys	Gln	Gln	Pro	Gly	Asn	Gly	Leu	Glu	Trp	Ile				

		35					40					45					
Gly	Trp	Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr	Glu	Tyr	Asn	Gln	Lys	Phe		
	50					55					60						
Asn	Gly	Lys	Ala	Thr	Leu	Thr	Ala	Asp	Lys	Ser	Ser	Ser	Thr	Ala	Tyr		
	65				70					75					80		
Met	Gln	Leu	Ser	Ser	Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Phe	Cys		
			85						90					95			
Ala	Arg	Gly	Asn	Tyr	Asn	Tyr	Glu	Tyr	Phe	Asp	Tyr	Trp	Gly	Gln	Gly		
		100						105					110				
Val	Met	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe		
	115						120					125					
Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu		
	130					135					140						
Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp		
145					150					155					160		
Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu		
				165					170					175			
Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser		
			180					185				190					
Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro		
	195						200					205					
Ser	Asn	Thr	Lys	Val	Asp	Lys	Arg	Val	Glu	Pro	Lys	Ser	Cys	Asp	Lys		
	210					215					220						
Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Ala	Ala	Gly	Gly	Pro		
225					230					235					240		
Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser		
				245					250					255			
Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val	Ser	His	Glu	Asp		
			260					265					270				
Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn		
	275						280					285					
Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val		
	290					295				300							
Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu		
305					310				315						320		
Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys		
				325				330					335				
Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr		
			340					345				350					
Leu	Pro	Pro	Cys	Arg	Glu	Glu	Met	Thr	Lys	Asn	Gln	Val	Ser	Leu	Trp		
	355						360					365					
Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu		
	370					375				380							
Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu		
385					390					395					400		
Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys		
				405				410						415			
Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val	Met	His	Glu		
			420					425					430				
Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly		
	435						440					445					

Lys

<210> 47
 <211> 695
 <212> PRT
 <213> Artificial Sequence

<400> 47

Gln	Val	Gln	Leu	Gln	Gln	Ser	Gly	Ala	Glu	Leu	Val	Lys	Pro	Gly	Ser	1	5	10	15
Ser	Val	Lys	Ile	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Asn	20	25	30	
Phe	Ile	His	Trp	Ile	Lys	Gln	Gln	Pro	Gly	Asn	Gly	Leu	Glu	Trp	Ile	35	40	45	
Gly	Trp	Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr	Glu	Tyr	Asn	Gln	Lys	Phe	50	55	60	
Asn	Gly	Lys	Ala	Thr	Leu	Thr	Ala	Asp	Lys	Ser	Ser	Ser	Thr	Ala	Tyr	65	70	75	80
Met	Gln	Leu	Ser	Ser	Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Phe	Cys	85	90	95	
Ala	Arg	Gly	Asn	Tyr	Asn	Tyr	Glu	Tyr	Phe	Asp	Tyr	Trp	Gly	Gln	Gly	100	105	110	
Val	Met	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe	115	120	125	
Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu	130	135	140	
Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp	145	150	155	160
Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu	165	170	175	
Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser	180	185	190	
Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro	195	200	205	
Ser	Asn	Thr	Lys	Val	Asp	Lys	Arg	Val	Glu	Pro	Lys	Ser	Cys	Asp	Lys	210	215	220	
Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Ala	Ala	Gly	Gly	Pro	225	230	235	240
Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	245	250	255	
Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val	Ser	His	Glu	Asp	260	265	270	
Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	275	280	285	
Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	290	295	300	
Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	305	310	315	320
Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	325	330	335	
Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	Cys	Thr	340	345	350	
Leu	Pro	Pro	Ser	Arg	Glu	Glu	Met	Thr	Lys	Asn	Gln	Val	Ser	Leu	Ser				

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

<210> 49

<211> 695

<212> PRT

<213> Artificial Sequence

<400> 49

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

145					150					155				160
Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val
				165					170					175
Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro
			180					185					190	
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	Arg	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
Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile
				245					250					255
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		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
Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu
				325					330					335
Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr
			340					345					350	Thr
Leu	Pro	Pro	Ser	Arg	Glu	Glu	Met	Thr	Lys	Asn	Gln	Val	Ser	Leu
		355					360					365		Thr
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
Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp
				405					410					415
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
Lys	Gly	Gly	Gly	Gly	Ser	Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Gly
	450					455				460				Gly
Val	Val	Gln	Pro	Gly	Arg	Ser	Leu	Arg	Leu	Ser	Cys	Lys	Ala	Ser
465					470					475				480
Tyr	Thr	Phe	Thr	Arg	Tyr	Thr	Met	His	Trp	Val	Arg	Gln	Ala	Pro
				485					490					495
Lys	Gly	Leu	Glu	Trp	Ile	Gly	Tyr	Ile	Asn	Pro	Ser	Arg	Gly	Tyr
			500					505					510	Thr
Asn	Tyr	Asn	Gln	Lys	Val	Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp
		515					520					525		Asn
Ser	Lys	Asn	Thr	Ala	Phe	Leu	Gln	Met	Asp	Ser	Leu	Arg	Pro	Glu
	530					535					540			Asp
Thr	Gly	Val	Tyr	Phe	Cys	Ala	Arg	Tyr	Tyr	Asp	Asp	His	Tyr	Ser
545					550					555				560
Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Pro	Val	Thr	Val	Ser	Ser	Gly	Gly
				565					570					575

Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Asp	Ile	Gln	Met	
			580					585					590			
Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly	Asp	Arg	Val	Thr	
		595					600					605				
Ile	Thr	Cys	Ser	Ala	Ser	Ser	Ser	Val	Ser	Tyr	Met	Asn	Trp	Tyr	Gln	
	610					615					620					
Gln	Thr	Pro	Gly	Lys	Ala	Pro	Lys	Arg	Trp	Ile	Tyr	Asp	Thr	Ser	Lys	
625					630					635					640	
Leu	Ala	Ser	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	
			645					650						655		
Asp	Tyr	Thr	Phe	Thr	Ile	Ser	Ser	Leu	Gln	Pro	Glu	Asp	Ile	Ala	Thr	
			660					665					670			
Tyr	Tyr	Cys	Gln	Gln	Trp	Ser	Ser	Asn	Pro	Phe	Thr	Phe	Gly	Gln	Gly	
		675				680						685				
Thr	Lys	Leu	Gln	Ile	Thr	Arg										
	690					695										

<210> 50
 <211> 473
 <212> PRT
 <213> Artificial Sequence

<400> 50

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

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

<210> 51
 <211> 474
 <212> PRT
 <213> Artificial Sequence

<400> 51

Gln	Val	Gln	Leu	Gln	Gln	Ser	Gly	Ala	Glu	Leu	Val	Lys	Pro	Gly	Ser
1				5					10					15	
Ser	Val	Lys	Ile	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Asn
			20					25					30		
Phe	Ile	His	Trp	Ile	Lys	Gln	Gln	Pro	Gly	Asn	Gly	Leu	Glu	Trp	Ile
	35					40						45			
Gly	Trp	Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr	Glu	Tyr	Asn	Gln	Lys	Phe
	50					55					60				
Asn	Gly	Lys	Ala	Thr	Leu	Thr	Ala	Asp	Lys	Ser	Ser	Ser	Thr	Ala	Tyr
65					70					75					80
Met	Gln	Leu	Ser	Ser	Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Phe	Cys
			85						90					95	
Ala	Arg	Gly	Asn	Tyr	Asn	Tyr	Glu	Tyr	Phe	Asp	Tyr	Trp	Gly	Gln	Gly
			100				105						110		

Val	Met	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe
		115					120					125			
Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu
	130					135					140				
Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp
145					150					155					160
Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu
				165					170					175	
Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser
			180					185					190		
Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro
		195					200					205			
Ser	Asn	Thr	Lys	Val	Asp	Lys	Arg	Val	Glu	Pro	Lys	Ser	Cys	Gly	Gly
		210				215					220				
Gly	Gly	Ser	Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Gly	Gly	Val	Val	Gln
225					230					235					240
Pro	Gly	Arg	Ser	Leu	Arg	Leu	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe
				245					250					255	
Thr	Arg	Tyr	Thr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu
			260					265					270		
Glu	Trp	Ile	Gly	Tyr	Ile	Asn	Pro	Ser	Arg	Gly	Tyr	Thr	Asn	Tyr	Asn
		275					280					285			
Gln	Lys	Val	Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn
	290					295					300				
Thr	Ala	Phe	Leu	Gln	Met	Asp	Ser	Leu	Arg	Pro	Glu	Asp	Thr	Gly	Val
305					310					315					320
Tyr	Phe	Cys	Ala	Arg	Tyr	Tyr	Asp	Asp	His	Tyr	Ser	Leu	Asp	Tyr	Trp
				325					330					335	
Gly	Gln	Gly	Thr	Pro	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Gly
			340					345					350		
Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Asp	Ile	Gln	Met	Thr	Gln	Ser
		355					360					365			
Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly	Asp	Arg	Val	Thr	Ile	Thr	Cys
		370				375					380				
Ser	Ala	Ser	Ser	Ser	Val	Ser	Tyr	Met	Asn	Trp	Tyr	Gln	Gln	Thr	Pro
385					390					395					400
Gly	Lys	Ala	Pro	Lys	Arg	Trp	Ile	Tyr	Asp	Thr	Ser	Lys	Leu	Ala	Ser
				405					410					415	
Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Thr
			420				425						430		
Phe	Thr	Ile	Ser	Ser	Leu	Gln	Pro	Glu	Asp	Ile	Ala	Thr	Tyr	Tyr	Cys
		435					440					445			
Gln	Gln	Trp	Ser	Ser	Asn	Pro	Phe	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu
	450					455					460				
Gln	Ile	Thr	Arg	His	His	His	His	His	His						
465					470										

<210> 52

<211> 695

<212> PRT

<213> Artificial Sequence

<400> 52

Gln	Val	Gln	Leu	Gln	Gln	Ser	Gly	Ala	Glu	Leu	Val	Lys	Pro	Gly	Ser	1	5	10	15
Ser	Val	Lys	Ile	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Asn	20	25	30	
Phe	Ile	His	Trp	Ile	Lys	Gln	Gln	Pro	Gly	Asn	Gly	Leu	Glu	Trp	Ile	35	40	45	
Gly	Trp	Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr	Glu	Tyr	Asn	Gln	Lys	Phe	50	55	60	
Asn	Gly	Lys	Ala	Thr	Leu	Thr	Ala	Asp	Lys	Ser	Ser	Ser	Thr	Ala	Tyr	65	70	75	80
Met	Gln	Leu	Ser	Ser	Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Phe	Cys	85	90	95	
Ala	Arg	Gly	Asn	Tyr	Asn	Tyr	Glu	Tyr	Phe	Asp	Tyr	Trp	Gly	Gln	Gly	100	105	110	
Val	Met	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe	115	120	125	
Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu	130	135	140	
Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp	145	150	155	160
Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu	165	170	175	
Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser	180	185	190	
Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro	195	200	205	
Ser	Asn	Thr	Lys	Val	Asp	Lys	Arg	Val	Glu	Pro	Lys	Ser	Cys	Gly	Gly	210	215	220	
Gly	Gly	Ser	Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Gly	Gly	Val	Val	Gln	225	230	235	240
Pro	Gly	Arg	Ser	Leu	Arg	Leu	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	245	250	255	
Thr	Arg	Tyr	Thr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	260	265	270	
Glu	Trp	Ile	Gly	Tyr	Ile	Asn	Pro	Ser	Arg	Gly	Tyr	Thr	Asn	Tyr	Asn	275	280	285	
Gln	Lys	Val	Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	290	295	300	
Thr	Ala	Phe	Leu	Gln	Met	Asp	Ser	Leu	Arg	Pro	Glu	Asp	Thr	Gly	Val	305	310	315	320
Tyr	Phe	Cys	Ala	Arg	Tyr	Tyr	Asp	Asp	His	Tyr	Ser	Leu	Asp	Tyr	Trp	325	330	335	
Gly	Gln	Gly	Thr	Pro	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Gly	340	345	350	
Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Asp	Ile	Gln	Met	Thr	Gln	Ser	355	360	365	
Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly	Asp	Arg	Val	Thr	Ile	Thr	Cys	370	375	380	
Ser	Ala	Ser	Ser	Ser	Val	Ser	Tyr	Met	Asn	Trp	Tyr	Gln	Gln	Thr	Pro	385	390	395	400
Gly	Lys	Ala	Pro	Lys	Arg	Trp	Ile	Tyr	Asp	Thr	Ser	Lys	Leu	Ala	Ser	405	410	415	

Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Thr		
			420					425					430				
Phe	Thr	Ile	Ser	Ser	Leu	Gln	Pro	Glu	Asp	Ile	Ala	Thr	Tyr	Tyr	Cys		
		435					440					445					
Gln	Gln	Trp	Ser	Ser	Asn	Pro	Phe	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu		
	450					455					460						
Gln	Ile	Thr	Arg	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro		
465					470				475						480		
Glu	Ala	Ala	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys		
			485					490						495			
Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val		
		500						505					510				
Asp	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp		
		515					520					525					
Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr		
	530					535					540						
Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp		
545					550				555						560		
Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu		
			565					570						575			
Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg		
			580					585					590				
Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Glu	Glu	Met	Thr	Lys		
		595					600					605					
Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp		
	610					615					620						
Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys		
625					630					635					640		
Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser		
				645					650					655			
Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser		
			660					665					670				
Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser		
		675					680					685					
Leu	Ser	Leu	Ser	Pro	Gly	Lys											
	690					695											

<210> 53
 <211> 580
 <212> PRT
 <213> Artificial Sequence

<400> 53

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

65					70					75					80
Met	Gln	Leu	Ser	Ser	Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Phe	Cys
				85					90					95	
Ala	Arg	Gly	Asn	Tyr	Asn	Tyr	Glu	Tyr	Phe	Asp	Tyr	Trp	Gly	Gln	Gly
			100					105					110		
Val	Met	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe
		115					120					125			
Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu
	130					135					140				
Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp
145					150					155					160
Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu
				165					170					175	
Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser
			180					185					190		
Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro
		195					200					205			
Ser	Asn	Thr	Lys	Val	Asp	Lys	Arg	Val	Glu	Pro	Lys	Ser	Cys	Gly	Gly
	210					215					220				
Gly	Gly	Ser	Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Gly	Gly	Val	Val	Gln
225					230					235					240
Pro	Gly	Arg	Ser	Leu	Arg	Leu	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe
				245					250					255	
Thr	Arg	Tyr	Thr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu
			260					265					270		
Glu	Trp	Ile	Gly	Tyr	Ile	Asn	Pro	Ser	Arg	Gly	Tyr	Thr	Asn	Tyr	Asn
		275				280						285			
Gln	Lys	Val	Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn
	290					295					300				
Thr	Ala	Phe	Leu	Gln	Met	Asp	Ser	Leu	Arg	Pro	Glu	Asp	Thr	Gly	Val
305					310					315					320
Tyr	Phe	Cys	Ala	Arg	Tyr	Tyr	Asp	Asp	His	Tyr	Ser	Leu	Asp	Tyr	Trp
				325					330					335	
Gly	Gln	Gly	Thr	Pro	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Gly
			340					345					350		
Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Asp	Ile	Gln	Met	Thr	Gln	Ser
		355					360					365			
Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly	Asp	Arg	Val	Thr	Ile	Thr	Cys
	370					375					380				
Ser	Ala	Ser	Ser	Ser	Val	Ser	Tyr	Met	Asn	Trp	Tyr	Gln	Gln	Thr	Pro
385					390					395					400
Gly	Lys	Ala	Pro	Lys	Arg	Trp	Ile	Tyr	Asp	Thr	Ser	Lys	Leu	Ala	Ser
				405					410					415	
Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Thr
			420					425					430		
Phe	Thr	Ile	Ser	Ser	Leu	Gln	Pro	Glu	Asp	Ile	Ala	Thr	Tyr	Tyr	Cys
		435					440					445			
Gln	Gln	Trp	Ser	Ser	Asn	Pro	Phe	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu
	450					455					460				
Gln	Ile	Thr	Arg	Ala	Ala	Ala	Gly	Gly	Gly	Gln	Pro	Arg	Glu	Pro	Gln
465					470					475					480
Val	Tyr	Thr	Leu	Pro	Ser	Arg	Glu	Glu	Met	Thr	Lys	Asn	Gln	Val	
				485				490					495		

Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val
			500					505					510		
Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro
		515					520					525			
Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	Thr
	530					535					540				
Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val
545					550					555					560
Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	Leu
				565					570					575	
Ser	Pro	Gly	Lys												
			580												

<210> 54

<211> 701

<212> PRT

<213> Artificial Sequence

<400> 54

Gln	Val	Gln	Leu	Gln	Gln	Ser	Gly	Ala	Glu	Leu	Val	Lys	Pro	Gly	Ser
1				5					10					15	
Ser	Val	Lys	Ile	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Asn
			20				25					30			
Phe	Ile	His	Trp	Ile	Lys	Gln	Gln	Pro	Gly	Asn	Gly	Leu	Glu	Trp	Ile
		35				40					45				
Gly	Trp	Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr	Glu	Tyr	Asn	Gln	Lys	Phe
	50					55				60					
Asn	Gly	Lys	Ala	Thr	Leu	Thr	Ala	Asp	Lys	Ser	Ser	Ser	Thr	Ala	Tyr
65					70				75					80	
Met	Gln	Leu	Ser	Ser	Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Phe	Cys
			85						90					95	
Ala	Arg	Gly	Asn	Tyr	Asn	Tyr	Glu	Tyr	Phe	Asp	Tyr	Trp	Gly	Gln	Gly
			100					105					110		
Val	Met	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe
		115					120					125			
Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu
	130					135					140				
Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp
145					150				155					160	
Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu
			165						170				175		
Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser
			180					185					190		
Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro
		195					200					205			
Ser	Asn	Thr	Lys	Val	Asp	Lys	Arg	Val	Glu	Pro	Lys	Ser	Cys	Gly	Gly
	210					215					220				
Gly	Gly	Ser	Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Gly	Gly	Val	Val	Gln
225					230				235						240
Pro	Gly	Arg	Ser	Leu	Arg	Leu	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe
				245					250					255	
Thr	Arg	Tyr	Thr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu

			260					265					270			
Glu	Trp	Ile	Gly	Tyr	Ile	Asn	Pro	Ser	Arg	Gly	Tyr	Thr	Asn	Tyr	Asn	
		275					280					285				
Gln	Lys	Val	Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	
	290					295					300					
Thr	Ala	Phe	Leu	Gln	Met	Asp	Ser	Leu	Arg	Pro	Glu	Asp	Thr	Gly	Val	
305					310					315					320	
Tyr	Phe	Cys	Ala	Arg	Tyr	Tyr	Asp	Asp	His	Tyr	Ser	Leu	Asp	Tyr	Trp	
				325					330					335		
Gly	Gln	Gly	Thr	Pro	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Gly	
			340					345					350			
Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Asp	Ile	Gln	Met	Thr	Gln	Ser	
		355					360					365				
Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly	Asp	Arg	Val	Thr	Ile	Thr	Cys	
	370					375					380					
Ser	Ala	Ser	Ser	Ser	Val	Ser	Tyr	Met	Asn	Trp	Tyr	Gln	Gln	Thr	Pro	
385					390					395					400	
Gly	Lys	Ala	Pro	Lys	Arg	Trp	Ile	Tyr	Asp	Thr	Ser	Lys	Leu	Ala	Ser	
				405					410					415		
Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Thr	
			420					425					430			
Phe	Thr	Ile	Ser	Ser	Leu	Gln	Pro	Glu	Asp	Ile	Ala	Thr	Tyr	Tyr	Cys	
		435					440					445				
Gln	Gln	Trp	Ser	Ser	Asn	Pro	Phe	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	
	450				455					460						
Gln	Ile	Thr	Arg	Gly	Gly	Gly	Gly	Ser	Gln	Val	Gln	Leu	Gln	Gln	Ser	
465					470					475					480	
Gly	Ala	Glu	Leu	Val	Lys	Pro	Gly	Ser	Ser	Val	Lys	Ile	Ser	Cys	Lys	
				485					490					495		
Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Asn	Phe	Ile	His	Trp	Ile	Lys	Gln	
			500					505					510			
Gln	Pro	Gly	Asn	Gly	Leu	Glu	Trp	Ile	Gly	Trp	Ile	Phe	Pro	Gly	Asp	
		515					520					525				
Gly	Asp	Thr	Glu	Tyr	Asn	Gln	Lys	Phe	Asn	Gly	Lys	Ala	Thr	Leu	Thr	
	530					535					540					
Ala	Asp	Lys	Ser	Ser	Ser	Thr	Ala	Tyr	Met	Gln	Leu	Ser	Ser	Leu	Thr	
545					550					555					560	
Ser	Glu	Asp	Ser	Ala	Val	Tyr	Phe	Cys	Ala	Arg	Gly	Asn	Tyr	Asn	Tyr	
				565					570					575		
Glu	Tyr	Phe	Asp	Tyr	Trp	Gly	Gln	Gly	Val	Met	Val	Thr	Val	Ser	Ser	
			580					585					590			
Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe	Pro	Leu	Ala	Pro	Ser	Ser	Lys	
		595					600					605				
Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu	Gly	Cys	Leu	Val	Lys	Asp	Tyr	
	610					615					620					
Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser	
625					630					635					640	
Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser	
				645					650					655		
Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser	Ser	Ser	Leu	Gly	Thr	Gln	Thr	
			660					665					670			
Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys	
	675						680					685				

Arg Val Glu Pro Lys Ser Cys His His His His His His
690 695 700

<210> 55
<211> 474
<212> PRT
<213> Artificial Sequence

<400> 55

Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Gly	Gly	Val	Val	Gln	Pro	Gly	Arg
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Ser	Leu	Arg	Leu	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Tyr
			20					25					30		
Thr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Ile
		35					40					45			
Gly	Tyr	Ile	Asn	Pro	Ser	Arg	Gly	Tyr	Thr	Asn	Tyr	Asn	Gln	Lys	Val
	50					55				60					
Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	Thr	Ala	Phe
	65				70				75						80
Leu	Gln	Met	Asp	Ser	Leu	Arg	Pro	Glu	Asp	Thr	Gly	Val	Tyr	Phe	Cys
				85					90					95	
Ala	Arg	Tyr	Tyr	Asp	Asp	His	Tyr	Ser	Leu	Asp	Tyr	Trp	Gly	Gln	Gly
			100					105					110		
Thr	Pro	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly
		115					120					125			
Ser	Gly	Gly	Gly	Gly	Ser	Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Ser
	130					135					140				
Leu	Ser	Ala	Ser	Val	Gly	Asp	Arg	Val	Thr	Ile	Thr	Cys	Ser	Ala	Ser
	145				150					155					160
Ser	Ser	Val	Ser	Tyr	Met	Asn	Trp	Tyr	Gln	Gln	Thr	Pro	Gly	Lys	Ala
				165					170					175	
Pro	Lys	Arg	Trp	Ile	Tyr	Asp	Thr	Ser	Lys	Leu	Ala	Ser	Gly	Val	Pro
			180					185					190		
Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Thr	Phe	Thr	Ile
		195				200						205			
Ser	Ser	Leu	Gln	Pro	Glu	Asp	Ile	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	Trp
	210					215					220				
Ser	Ser	Asn	Pro	Phe	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Gln	Ile	Thr
	225				230					235				240	
Arg	Gly	Gly	Gly	Gly	Ser	Gln	Val	Gln	Leu	Gln	Gln	Ser	Gly	Ala	Glu
				245					250					255	
Leu	Val	Lys	Pro	Gly	Ser	Ser	Val	Lys	Ile	Ser	Cys	Lys	Ala	Ser	Gly
			260					265					270		
Tyr	Thr	Phe	Thr	Arg	Asn	Phe	Ile	His	Trp	Ile	Lys	Gln	Gln	Pro	Gly
		275				280						285			
Asn	Gly	Leu	Glu	Trp	Ile	Gly	Trp	Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr
	290					295					300				
Glu	Tyr	Asn	Gln	Lys	Phe	Asn	Gly	Lys	Ala	Thr	Leu	Thr	Ala	Asp	Lys
				310						315					320
Ser	Ser	Ser	Thr	Ala	Tyr	Met	Gln	Leu	Ser	Ser	Leu	Thr	Ser	Glu	Asp
				325					330					335	
Ser	Ala	Val	Tyr	Phe	Cys	Ala	Arg	Gly	Asn	Tyr	Asn	Tyr	Glu	Tyr	Phe

			340					345					350				
Asp	Tyr	Trp	Gly	Gln	Gly	Val	Met	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr		
			355					360					365				
Lys	Gly	Pro	Ser	Val	Phe	Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser		
			370					375					380				
Gly	Gly	Thr	Ala	Ala	Leu	Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu		
385						390					395				400		
Pro	Val	Thr	Val	Ser	Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His		
				405					410					415			
Thr	Phe	Pro	Ala	Val	Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser		
			420					425					430				
Val	Val	Thr	Val	Pro	Ser	Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys		
			435				440					445					
Asn	Val	Asn	His	Lys	Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys	Arg	Val	Glu		
			450			455					460						
Pro	Lys	Ser	Cys	His	His	His	His	His	His								
465					470												

<210> 56

<211> 695

<212> PRT

<213> Artificial Sequence

<400> 56

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

Ser	Ser	Asn	Pro	Phe	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Gln	Ile	Thr
225					230					235					240
Arg	Gly	Gly	Gly	Gly	Ser	Gln	Val	Gln	Leu	Gln	Gln	Ser	Gly	Ala	Glu
				245					250					255	
Leu	Val	Lys	Pro	Gly	Ser	Ser	Val	Lys	Ile	Ser	Cys	Lys	Ala	Ser	Gly
			260					265					270		
Tyr	Thr	Phe	Thr	Arg	Asn	Phe	Ile	His	Trp	Ile	Lys	Gln	Gln	Pro	Gly
		275					280					285			
Asn	Gly	Leu	Glu	Trp	Ile	Gly	Trp	Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr
290						295					300				
Glu	Tyr	Asn	Gln	Lys	Phe	Asn	Gly	Lys	Ala	Thr	Leu	Thr	Ala	Asp	Lys
305					310					315					320
Ser	Ser	Ser	Thr	Ala	Tyr	Met	Gln	Leu	Ser	Ser	Leu	Thr	Ser	Glu	Asp
				325					330					335	
Ser	Ala	Val	Tyr	Phe	Cys	Ala	Arg	Gly	Asn	Tyr	Asn	Tyr	Glu	Tyr	Phe
			340					345					350		
Asp	Tyr	Trp	Gly	Gln	Gly	Val	Met	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr
		355					360						365		
Lys	Gly	Pro	Ser	Val	Phe	Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser
	370					375					380				
Gly	Gly	Thr	Ala	Ala	Leu	Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu
385					390					395					400
Pro	Val	Thr	Val	Ser	Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His
				405					410					415	
Thr	Phe	Pro	Ala	Val	Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser
			420					425					430		
Val	Val	Thr	Val	Pro	Ser	Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys
		435					440					445			
Asn	Val	Asn	His	Lys	Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys	Arg	Val	Glu
	450					455					460				
Pro	Lys	Ser	Cys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro
465					470					475					480
Glu	Ala	Ala	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys
				485					490					495	
Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val
			500					505					510		
Asp	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp
		515					520					525			
Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr
	530					535					540				
Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp
545					550					555					560
Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu
				565					570					575	
Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg
			580					585					590		
Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Glu	Glu	Met	Thr	Lys
		595					600					605			
Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp
	610					615					620				
Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys
625					630					635					640
Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser

				645					650				655			
Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	
			660					665					670			
Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser	
		675					680					685				
Leu	Ser	Leu	Ser	Pro	Gly	Lys										
	690					695										

<210> 57
 <211> 580
 <212> PRT
 <213> Artificial Sequence

<400> 57

Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Gly	Gly	Val	Val	Gln	Pro	Gly	Arg	
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Ser	Leu	Arg	Leu	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Tyr	
		20					25					30				
Thr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Ile	
		35				40						45				
Gly	Tyr	Ile	Asn	Pro	Ser	Arg	Gly	Tyr	Thr	Asn	Tyr	Asn	Gln	Lys	Val	
	50				55					60						
Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	Thr	Ala	Phe	
	65				70				75					80		
Leu	Gln	Met	Asp	Ser	Leu	Arg	Pro	Glu	Asp	Thr	Gly	Val	Tyr	Phe	Cys	
			85					90						95		
Ala	Arg	Tyr	Tyr	Asp	Asp	His	Tyr	Ser	Leu	Asp	Tyr	Trp	Gly	Gln	Gly	
		100					105					110				
Thr	Pro	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	
	115						120					125				
Ser	Gly	Gly	Gly	Gly	Ser	Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Ser	
	130					135					140					
Leu	Ser	Ala	Ser	Val	Gly	Asp	Arg	Val	Thr	Ile	Thr	Cys	Ser	Ala	Ser	
	145				150					155				160		
Ser	Ser	Val	Ser	Tyr	Met	Asn	Trp	Tyr	Gln	Gln	Thr	Pro	Gly	Lys	Ala	
			165					170						175		
Pro	Lys	Arg	Trp	Ile	Tyr	Asp	Thr	Ser	Lys	Leu	Ala	Ser	Gly	Val	Pro	
		180					185					190				
Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Thr	Phe	Thr	Ile	
	195					200					205					
Ser	Ser	Leu	Gln	Pro	Glu	Asp	Ile	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	Trp	
	210					215					220					
Ser	Ser	Asn	Pro	Phe	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Gln	Ile	Thr	
	225				230					235				240		
Arg	Gly	Gly	Gly	Gly	Ser	Gln	Val	Gln	Leu	Gln	Gln	Ser	Gly	Ala	Glu	
				245				250						255		
Leu	Val	Lys	Pro	Gly	Ser	Ser	Val	Lys	Ile	Ser	Cys	Lys	Ala	Ser	Gly	
		260					265						270			
Tyr	Thr	Phe	Thr	Arg	Asn	Phe	Ile	His	Trp	Ile	Lys	Gln	Gln	Pro	Gly	
		275				280						285				
Asn	Gly	Leu	Glu	Trp	Ile	Gly	Trp	Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr	
	290					295					300					

Glu	Tyr	Asn	Gln	Lys	Phe	Asn	Gly	Lys	Ala	Thr	Leu	Thr	Ala	Asp	Lys
305					310					315					320
Ser	Ser	Ser	Thr	Ala	Tyr	Met	Gln	Leu	Ser	Ser	Leu	Thr	Ser	Glu	Asp
				325					330					335	
Ser	Ala	Val	Tyr	Phe	Cys	Ala	Arg	Gly	Asn	Tyr	Asn	Tyr	Glu	Tyr	Phe
			340					345					350		
Asp	Tyr	Trp	Gly	Gln	Gly	Val	Met	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr
		355					360					365			
Lys	Gly	Pro	Ser	Val	Phe	Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser
	370					375					380				
Gly	Gly	Thr	Ala	Ala	Leu	Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu
385					390					395					400
Pro	Val	Thr	Val	Ser	Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His
				405					410					415	
Thr	Phe	Pro	Ala	Val	Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser
			420						425				430		
Val	Val	Thr	Val	Pro	Ser	Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys
		435					440					445			
Asn	Val	Asn	His	Lys	Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys	Arg	Val	Glu
	450					455					460				
Pro	Lys	Ser	Cys	Ala	Ala	Ala	Gly	Gly	Gly	Gln	Pro	Arg	Glu	Pro	Gln
465					470					475					480
Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Glu	Glu	Met	Thr	Lys	Asn	Gln	Val
				485					490					495	
Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val
			500					505					510		
Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro
		515					520					525			
Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	Thr
		530				535					540				
Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val
545					550					555					560
Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	Leu
				565					570					575	
Ser	Pro	Gly	Lys												
			580												

<210> 58
 <211> 228
 <212> PRT
 <213> Artificial Sequence

<400> 58

Gln	Val	Gln	Leu	Gln	Gln	Ser	Gly	Ala	Glu	Leu	Val	Lys	Pro	Gly	Ser
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Ser	Val	Lys	Ile	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Asn
			20					25					30		
Phe	Ile	His	Trp	Ile	Lys	Gln	Gln	Pro	Gly	Asn	Gly	Leu	Glu	Trp	Ile
		35					40					45			
Gly	Trp	Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr	Glu	Tyr	Asn	Gln	Lys	Phe
	50					55					60				
Asn	Gly	Lys	Ala	Thr	Leu	Thr	Ala	Asp	Lys	Ser	Ser	Ser	Thr	Ala	Tyr

65					70					75					80
Met	Gln	Leu	Ser	Ser	Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Phe	Cys
				85					90					95	
Ala	Arg	Gly	Asn	Tyr	Asn	Tyr	Glu	Tyr	Phe	Asp	Tyr	Trp	Gly	Gln	Gly
			100					105					110		
Val	Met	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe
		115					120					125			
Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu
	130					135					140				
Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp
145					150				155					160	
Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu
				165				170						175	
Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser
			180				185						190		
Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro
		195					200					205			
Ser	Asn	Thr	Lys	Val	Asp	Lys	Arg	Val	Glu	Pro	Lys	Ser	Cys	His	His
	210					215					220				
His	His	His	His												
225															

<210> 59
 <211> 460
 <212> PRT
 <213> Artificial Sequence

<400> 59

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

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

<210> 60
 <211> 449
 <212> PRT
 <213> Artificial Sequence

<400> 60

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

				85					90					95			
Ala	Arg	Gly	Asn	Tyr	Asn	Tyr	Glu	Tyr	Phe	Asp	Tyr	Trp	Gly	Gln	Gly		
			100					105					110				
Val	Met	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe		
		115					120					125					
Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu		
		130				135					140						
Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp		
145					150					155					160		
Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu		
				165					170					175			
Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser		
			180					185					190				
Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro		
		195					200					205					
Ser	Asn	Thr	Lys	Val	Asp	Lys	Arg	Val	Glu	Pro	Lys	Ser	Cys	Asp	Lys		
		210				215					220						
Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Ala	Ala	Gly	Gly	Pro		
225					230					235					240		
Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser		
				245					250					255			
Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val	Ser	His	Glu	Asp		
		260						265					270				
Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn		
		275					280					285					
Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val		
		290				295				300							
Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu		
305					310					315					320		
Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys		
				325					330					335			
Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr		
			340					345					350				
Leu	Pro	Pro	Ser	Arg	Glu	Glu	Met	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr		
		355					360					365					
Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu		
		370				375				380							
Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Pro	Pro	Val	Leu			
385					390					395				400			
Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys		
				405				410						415			
Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val	Met	His	Glu		
			420					425					430				
Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly		
		435					440					445					

Lys

<210> 61

<211> 334

<212> PRT

<213> Artificial Sequence

<400> 61

Gln	Val	Gln	Leu	Gln	Gln	Ser	Gly	Ala	Glu	Leu	Val	Lys	Pro	Gly	Ser
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Ser	Val	Lys	Ile	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Asn
			20					25						30	
Phe	Ile	His	Trp	Ile	Lys	Gln	Gln	Pro	Gly	Asn	Gly	Leu	Glu	Trp	Ile
		35					40						45		
Gly	Trp	Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr	Glu	Tyr	Asn	Gln	Lys	Phe
	50					55					60				
Asn	Gly	Lys	Ala	Thr	Leu	Thr	Ala	Asp	Lys	Ser	Ser	Ser	Thr	Ala	Tyr
65					70					75					80
Met	Gln	Leu	Ser	Ser	Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Phe	Cys
				85					90						95
Ala	Arg	Gly	Asn	Tyr	Asn	Tyr	Glu	Tyr	Phe	Asp	Tyr	Trp	Gly	Gln	Gly
			100					105						110	
Val	Met	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe
		115					120					125			
Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu
	130					135					140				
Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp
145					150					155					160
Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu
				165					170					175	
Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser
			180					185					190		
Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro
		195					200					205			
Ser	Asn	Thr	Lys	Val	Asp	Lys	Arg	Val	Glu	Pro	Lys	Ser	Cys	Ala	Ala
	210					215					220				
Ala	Gly	Gly	Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro
225					230					235					240
Ser	Arg	Glu	Glu	Met	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val
				245					250					255	
Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly
			260					265						270	
Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp
		275					280						285		
Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp
	290					295					300				
Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	His
305					310					315					320
Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly	Lys		
				325						330					

<210> 62
 <211> 2142
 <212> DNA
 <213> Artificial Sequence

<400> 62
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60

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ccaggcaatg gactagagt gattggatgg atctttcctg gcgatgggga caccgaatac	180
aatcagaaat tcaacgggaa agccacctta actgctgata agtcttcctc aaccgcatac	240
atgcagttaa gcagcctgac atccgaggat tcagccgtgt acttttgtgc tagaggcaac	300
tacaattacg agtatttcga ttattggggc cagggcgtta tggtcaccgt gtcatccggt	360
ggtggcggga gtggcggagg tggctctggt ggtggaggat ctgatataca gatgacgcag	420
agtcccgcca gcttatctgc gtccctgggg gaaaccgtgt cgattgaatg cctagcaagt	480
gaggacatct atagctacct tgcattggtac caacagaaac ccggtaaaag tcctcagttg	540
ttgatatttg ccgccaaccg gttacaggac ggagtcccca gcaggttttc tgggtcaggg	600
agcggtagac agttttccct gaagatctca gggatgcagc cagaagacga gggcgattac	660
ttctgtctgc agggttctaa gttcccgtac accttcggac ctggcactaa gctggaactc	720
aatggcggcg gcggtagcca ggtccagctt gttcagtctg ggggaggggt agtgcaacca	780
ggaagatccc tgaggctgtc atgcaaagcc tccgggtata cattcacccg ctatacgatg	840
cattgggtga gacaggcacc gggaaagggg cttgaatgga tcggctatat taacccatca	900
agaggctaca ctaactataa ccagaaagtg aaagaccggt ttactatctc gcgtgataac	960
agcaaaaaa ctgccttctt gcagatggat agcctgaggc cagaggacac aggcgtgtat	1020
ttttgtgcgc ggtattatga cgaccattac tcgctcgact attgggggca aggcactcct	1080
gtcaccgtca gctctggagg cgggggaagt ggaggaggag ggtccggtgg cgggggatca	1140
gacatccaaa tgactcagag cccctcaagt ctgtcagctt cgggtgggcga tcgcgtcacg	1200
attacttgta gcgccagtag tagcgttagc tacatgaact ggtatcagca aacaccaggt	1260
aaagccccc aacgctggat ttatgacacc agcaaattgg cttctggagt gcctagtcgt	1320
tttagcggat ctggatcagg cacagactac accttcacca tttcctccct tcaacccgag	1380
gacatagcga catactactg tcagcagtgg agttccaatc cattcacgtt tgggtcaagga	1440
acgaagctgc agataaccag agacaagact cacacttgcc ctccttgtcc tgccccgaa	1500
gccgccggcg gcccttcagt atttctcttt ccaccgaaac ctaaggacac attgatgatc	1560
tcacgcactc cagaagtgac ctgcgtggtg gttgatgtct cacacgaaga tcctgaggtg	1620
aaattcaact ggtacgtaga tggcgtggaa gtccataacg cgaagacaaa gccagagag	1680

gagcagtata attcgaccta tcgggtggtt tcggtactga ccgtcctgca tcaggactgg	1740
cttaacggca aggagtacaa gtgcaaggtt tctaataaag ccctcccagc tcccatcgag	1800
aaaacaatca gcaaggctaa gggccaaccc aggggaacccc aagtctacac tttgccaccg	1860
agtcgtgacg agctcacaaa aaatcaggtg tctttaactt gcctcgtaaa gggcttttat	1920
cccagcgaca ttgccgtcga gtgggaatcg aatggccagc cagaaaacaa ctacaagact	1980
actccacccg tgctcgactc agacggctcc tttttcctgt actccaaact tactgtggat	2040
aagagtagat ggcagcaggg caatgtgttc tcctgttcag tgatgcatga agcccttcac	2100
aaccattaca cacagaaatc cttgtctctg tccccaggca ag	2142

<210> 63
 <211> 2166
 <212> DNA
 <213> Artificial Sequence

<400> 63	
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atcgaatgtc tggcgtccga ggatatctac agctacctgg cttggtacca gcagaaaccc	120
gggaagtcac ctcagttgct gatatttgcc gctaacaggc tccaggatgg ggtgccaaagc	180
agattttcag ggtccgggag tgggacgcag ttcagcctca aaatctccgg gatgcagccc	240
gaagacgaag gggactactt ttgcctcaa ggatctaagt ttccgtacac tttcggacct	300
ggaaccaaac ttgagctgaa tggcggcggc ggctccggcg gcggtggatc cggggggggc	360
gggagccagg tccaactgca gcagtctggc gccgaactcg tcaagccggg cagtagtgtg	420
aagatctctt gtaaagcaag cggctatacc tttaccgga attttattca ctggattaag	480
cagcaaccag gcaatggcct agagtggata ggatggatct ttccaggcga tggtgacaca	540
gaatacaatc agaagttcaa tggcaaagca aactgactg ccgacaaaag cagtagcact	600
gcctacatgc agctctcatc cttaacctca gaggactcag ccgtctactt ctgcgctaga	660
ggaaactaca actacgagta cttcgactac tggggccaag gcgtaatggg gactgtgtct	720
tcggggagggg gaggttcaca ggttcagctg gtgcagtctg gaggcggagt ggtccaacca	780
ggtcgtccc tgaggctgag ttgcaaggca tccggttata ccttcacccg ctacactatg	840
cactgggttc gacaagctcc aggtaaaggg ctcgaatgga ttgggtatat caacccttct	900

cgggggtata ccaactataa ccagaaggtt aaagaccggt tcaccattag ccgggataac	960
tctaagaaca ctgcatttct gcagatggat tccctcagac ccgaagatac ggggtgtgtac	1020
ttctgtgcca gatactacga tgaccactac agcttggact attgggggca aggaactcct	1080
gtaaccgtga gcagtggagg agggggctct ggtggaggtg gatctggcgg aggaggctcc	1140
gacatacaga tgaccagtc tccctcgtcc ttgtccgcct ccgtaggaga tcgggtgact	1200
atcacctgtt cagcatcctc gtcagtgagc tatatgaact ggtatcaaca aacaccaggg	1260
aaagctccga agcgctggat ctacgatacc agcaagttag cgtcaggcgt cccctctcga	1320
tttagtggct ctgggtcagg gacagactat acatttacga tctcaagcct tcaacctgag	1380
gacattgcca cgtattattg ccagcagtgg tcttctaadc cattcacctt tggtcagggg	1440
actaaactgc agattactag gttggaggta ctcttccaag gtcctgacaa gacacatact	1500
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aaaccaagg atactctcat gatatcacgt acaccgaag tgacatgcgt tgtcgtagac	1620
gtagtcatg aggatcctga ggtgaaattc aactggtatg tggacggcgt tgaagtgcac	1680
aatgccaaga caaagccacg tgaggaacag tacaatagca cctatagggt ggtttcagt	1740
ttaacagtcc tgcatcagga ttggcttaat ggcaaggagt acaagtcaa agtctcgaac	1800
aaggcactgc ctgctccgat tgagaagaca atctcgaaag cgaagggaca gcctagagaa	1860
ccacaggtgt acacactccc tcccagtagg gacgagctaa caaagaatca ggtgagctta	1920
acctgcctcg tgaaaggctt ttatccctcc gatattgcag tcgagtggga gtccaacggt	1980
caacccgaga acaactataa gacaactccc cctgtgttg acagtgcgg atccttcttc	2040
ctgtatagca aacttaccgt cgataaaagt cgctggcagc agggaaatgt tttcagttgc	2100
agcgtgatgc atgaggccct gcacaatcac tataccaga agagtctttc tctatctcct	2160
ggcaaa	2166

<210> 64
 <211> 2142
 <212> DNA
 <213> Artificial Sequence

<400> 64	
caggttcaac tgggtgcagtc cggcggtggc gtggtgcaac ctggcagatc cttacggctg	60

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ccaggaaagg ggttggagt gatcggttac attaatccca gccgaggcta taccaactat	180
aaccagaagg tcaaagacag gtttacaatc agccgagaca atagcaagaa taccgccttt	240
cttcagatgg actccctaag acctgaggac actggcgtgt atttctgcgc ccgttattac	300
gatgaccact actccctgga ctattggggc caggggaccc cggtaacagt gtcttccgga	360
ggcggcggat ctggcggagg tggatccggc ggcgggtgggt ccgatatcca aatgactcag	420
tcaccgagca gtctgtccgc cagcgttggg gacagagtga ccatcacatg cagtgttagt	480
tcctccgtct cttacatgaa ttggtatcag cagactccgg gtaaggcgcc taaaagggtg	540
atttacgata cctccaagct cgcattccgg gtctcttcca gatttagcgg gtccggctct	600
gggactgact acacattcac cataagtagc ctacaacccg aagatatcgc aacctattac	660
gttcagcagt ggtcttcgaa tccttttacg tttggacagg gaaccaaact gcagattaca	720
cggggagggg gcggctctca agtgcagtta caacagtcgg gcgctgaact tgtgaaacca	780
ggctcttcag tcaagatcag ttgcaaagcc tctggctata cattcactcg caatttcac	840
cactggataa agcagcaacc tggaaatggc ctggaatgga taggatggat tttcccgggt	900
gatggcgata cagagtacaa ccagaagttc aacgggaaag ctaccctcac tgccgataag	960
tccagttcta ccgcatacat gcagcttagt agcttgacaa gtgaagatag cgctgtctac	1020
ttttgcgcca gaggaaacta caattacgag tattttgact actggggcca aggggtcatg	1080
gtcacagtta gtcagggggg aggcgggtca ggagggggag ggagcggagg cgggtggcagc	1140
gacattcaga tgactcagag ccccgttct ctttccgcct cactcgggga gactgtgagc	1200
atcgagtgtc tcgcaagcga ggatatctat tcctatctgg cttggtacca gcagaaaccc	1260
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gaggacgaag gtgactactt ttgtctgcaa gggtcgaagt tcccctatac gttcgggtcca	1440
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gccgccggcg gcccttcagt atttctctt ccaccgaaac ctaaggacac attgatgac	1560
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aagagtagat ggcagcaggg caatgtgttc tcctgttcag tgatgcatga agcccttcac	2100
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<210> 65

<211> 2142

<212> DNA

<213> Artificial Sequence

<400> 65

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<210> 66
 <211> 2151
 <212> DNA
 <213> Artificial Sequence

<400> 66	
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aaccagaagg tgaaagacag attcaccatc tctagggaca actccaagaa cacagcgttt	240
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gatgaccact acagcctgga ttattggggc cagggtaccc ctgtgactgt ctcgtcaggc	360
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tacaagacta ctccaccgt gctcgactca gacggctcct ttttcctgta ctccaaactt	2040
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<210> 67

<211> 2127

<212> DNA

<213> Artificial Sequence

<400> 67

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aaagccccga agcgggtggat ttatgacact agtaaactcg cttctggagt cccaagccgc	180
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actaaattgc agattaccag aggtggaggt ggatcccagg tgcagttaca gcagtctggc	360
gctgaactgg tgaaaccggg gtcactctgtg aagatatcct gcaaggctag cggatataca	420
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gactccgatg ggtcattctt cctgtattcc aaactgactg tggataagag caggtggcaa	2040
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<210> 68

<211> 2127

<212> DNA

<213> Artificial Sequence

<400> 68

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tacaactatg agtactttga ctattggggg caaggtgtga tggtgaccgt ctcctccggg	360
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cagggcaacg tgttttcctg ttccgtgatg catgaggctc tgcacaacca ctacaccag	2100
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<210> 69

<211> 2151

<212> DNA

<213> Artificial Sequence

<400> 69

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cgattcagcg ggagcgggaag tggcactcag ttttcctga agatttcgg aatgcagcca	240
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<210> 70

<211> 1479

<212> DNA

<213> Artificial Sequence

<400> 70

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ccaggaaatg gcctcgagtg gattgggtgg atatttcccg gggatggaga taccgagtac	180
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<210> 71
 <211> 1479
 <212> DNA
 <213> Artificial Sequence

<400> 71	
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<210> 72

<211> 1479

<212> DNA

<213> Artificial Sequence

<400> 72

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cctggaaaag gactggaatg gatcggctac atcaacccca gccggggcta caccaactac	180
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<210> 73
 <211> 1479
 <212> DNA
 <213> Artificial Sequence

<400> 73
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gtcatggtta cggtatccag tcaccatcac caccatcat 1479

<210> 74

<211> 1347

<212> DNA

<213> Artificial Sequence

<400> 74

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cctggcaatg gcctcgaatg gatcggatgg atttttcccg gtgatggcga taccgagtat 180
aaccagaagt tcaatgggaa ggcaacacta acagccgaca aatcctcatc cacagcctat 240
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tataactacg agtatttcga ctactgggggt caggggggtga tgggtgaccgt atcttccgct 360
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gacagcgacg ggagtttctt cctgtattcc aagctgactg ttgacaagtc ccgttggcag 1260
cagggaacg tgtttagctg ttccgtgatg cacgaagccc tgcacaacca ctacaccag 1320

aaaagcctct ctctctctcc agggaag 1347

<210> 75

<211> 2085

<212> DNA

<213> Artificial Sequence

<400> 75

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cccggaatg gactagagtg gattgggtgg attttcccgg gagatggcga taccgagtat	180
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tacaactatg agtactttga ctactgggga caaggggtga tggtagactgt atcctccgct	360
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accataagca gtctacagcc agaagacatt gccacatact actgtcagca atggctctct	2040
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<210> 76

<211> 642

<212> DNA

<213> Artificial Sequence

<400> 76

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gggaaatcac cacagctgtt gatctttgcg gccaacaggc ttcaggacgg agtccttagc	180
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gaagacgaag gagactactt ctgcttgagc ggatctaaat tcccatacac ttttggccct	300
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gaatccgtga ctgagcaaga cagcaaggat tccacctaca gtctcagcag cacactgacc	540
ctctccaaag cagactacga gaagcacaag gtgtatgcct gtgaggtaac ccatcaaggg	600

cttagctccc cagtcaccaa gagtttcaat aggggcgagt gt 642

<210> 77

<211> 2085

<212> DNA

<213> Artificial Sequence

<400> 77

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<210> 78

<211> 1419

<212> DNA

<213> Artificial Sequence

<400> 78

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<210> 79

<211> 1422

<212> DNA

<213> Artificial Sequence

<400> 79

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 <211> 1740
 <212> DNA
 <213> Artificial Sequence

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<210> 82

<211> 2103

<212> DNA

<213> Artificial Sequence

<400> 82

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 <211> 1422
 <212> DNA
 <213> Artificial Sequence

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<210> 84
 <211> 2085
 <212> DNA
 <213> Artificial Sequence

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<210> 85

<211> 1740

<212> DNA

<213> Artificial Sequence

<400> 85

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<210> 86

<211> 684

<212> DNA

<213> Artificial Sequence

<400> 86

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684

<210> 87

<211> 1380

<212> DNA

<213> Artificial Sequence

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atttacgata catccaaact ggcaagcggg gtaccctcca ggttttctgg cagcgggtct	600
ggaacagact acaccttcac cattagctcc ttgcagccag aagatattgc aacctactac	660
tgtcagcagt ggtctagcaa cccctttacc ttcgggcagg gaaccaagct gcagataact	720
cggggcggcg gtggatctga catccaaatg actcagtccc cagctagcct gagtgctagc	780
cttgagaga ctgtgtcaat cgagtgtctt gcctctgagg acatctacag ctatctcgcc	840
tggtagaac agaagcccgg aaagagccct cagctgctga tctttgccgc caatgcctc	900
caggatggcg tacctagccg tttctccgga tcaggttcag ggactcagtt ttcactgaag	960
atatcaggta tgcagcccga ggacgaaggc gattactttt gcctgcaagg gtctaagttc	1020
ccgtatactt ttgggcccgg caccaaattg gagctgaaca ggacagtcgc ggcacctagt	1080
gtctttatct tcccaccag cgatgaacag ctgaagtctg ggaccgcaag cgttgtgtgc	1140
ctgctgaata acttctatcc gagagaagcc aaggttcagt ggaaagttga caatgcgttg	1200
cagagtggca atagccagga atccgtgacc gagcaggatt ccaaagactc cacatactct	1260
cttagtagca cactcacct cagtaaagct gattacgaga agcacaaggt gtatgcctgt	1320

gaagtgaccc atcaagggtc ttcttctccg gtgacaaaat ctttcaacag aggggaatgc 1380

<210> 88

<211> 1347

<212> DNA

<213> Artificial Sequence

<400> 88

caggtacagt tgcagcaatc tggggcagaa ctggtcaaac ccgggagttc tgtgaaaatc 60

tcctgtaagg ccagtggata taccttcacc cgtaatttca tccactggat caaacaacag 120

cctggcaatg gcctcgaatg gatcggatgg atttttcccg gtgatggcga taccgagtat 180

aaccagaagt tcaatgggaa ggcaacacta acagccgaca aatcctcatc cacagcctat 240

atgcaactta gtagcctcac atctgaagat agcgccgtgt acttttgcgc aaggggcaac 300

tataactacg agtatttcga ctactgggggt caggggggtga tgggtgaccgt atcttccgct 360

agtactaaag gaccagcgt gtttccactg gcaccatcct ctaaattctac aagcggaggc 420

actgccgcac ttggctgcct ggtcaaagac tattttcctg aaccgctcac tgtgtcttgg 480

aactctggag ctttgacatc tggcgttcac acttttcccg cagtactcca gtcactctggc 540

ctgtattctc tgtcaagtgt tgtgactgtt cccagcagta gtctgggaac ccagacctac 600

atatgcaacg tcaaccataa acccagcaac acaaagggtg ataagcgcgt cgagcctaag 660

agctgcgata agaccatac atgcccacca tgtcccgtc cagaggccgc cggagggtcca 720

tccgtattct tgtttcctcc caaacccaag gataccctga tgatcagccg gacacctgaa 780

gtcacttggt tggttgtgga cgtatcccat gaagatccag aggtgaagtt caactggtac 840

gtcgacggtg tcgaagtcca taatgccaaa accaaaccta gggaggaaca gtacaacagt 900

acctaccgag tagtgtcagt cctgactgtg ttgcaccagg actggctgaa tggtaaggag 960

tacaagtgta aggtgtccaa taaggccctt cctgctccca ttgaaaagac catctccaaa 1020

gcaaaagggc agccaagaga gccccagggtg tatacactgc ctccatctag agaggagatg 1080

accaagaatc aggttagtct gacatgcctg gttaaggggt tttatccctc agatattgcc 1140

gtggagtggg agtccaatgg ccaacccgag aataactaca agaccacgcc tcccgtgctt 1200

gacagcgacg ggagtttctt cctgtattcc aagctgactg ttgacaagtc ccgttggcag 1260

cagggaaacg tgtttagctg ttccgtgatg cacgaagccc tgcacaacca ctacaccag 1320

aaaagcctct ctctctctcc agggaag 1347

<210> 89

<211> 1002

<212> DNA

<213> Artificial Sequence

<400> 89

caggtacagt tgcagcaatc tggggcagaa ctggtcaaac ccgggagttc tgtgaaaatc 60
tcctgtaagg ccagtggata taccttcacc cgtaatttca tccactggat caaacaacag 120
cctggcaatg gcctcgaatg gatcggatgg atttttcccg gtgatggcga taccgagtat 180
aaccagaagt tcaatgggaa ggcaacacta acagccgaca aatcctcatc cacagcctat 240
atgcaactta gtagcctcac atctgaagat agcgccgtgt acttttgcgc aaggggcaac 300
tataactacg agtatttcga ctactgggggt caggggggtga tgggtgaccgt atcttccgct 360
agtactaaag gaccagcgt gtttccactg gcaccatcct ctaaattctac aagcggaggc 420
actgccgcac ttggctgcct ggtcaaagac tattttcctg aaccggtcac tgtgtcttgg 480
aactctggag ctttgacatc tggcgttcac acttttcccg cagtactcca gtcattctggc 540
ctgtattctc tgtcaagtgt tgtgactgtt cccagcagta gtctgggaac ccagacctac 600
atatgcaacg tcaaccataa acccagcaac acaaaggtgg ataagcgcgt cgagcctaag 660
agctgcgctg cagccggagg cgggcagcca agagagcccc aggtgtatac actgcctcca 720
tctagagagg agatgaccaa gaatcagggtt agtctgacat gcctgggttaa ggggttttat 780
ccctcagata ttgccgtgga gtggggagtcc aatggccaac ccgagaataa ctacaagacc 840
acgcctcccg tgcttgacag cgacgggagt ttcttcctgt attccaagct gactgttgac 900
aagtccccgtt ggcagcaggg aaacgtgttt agctgttccg tgatgcacga agccctgcac 960
aaccactaca cccagaaaag cctctctctc tctccaggga ag 1002

<210> 90

<211> 119

<212> PRT

<213> Artificial Sequence

<400> 90

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 Arg Asn

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

<210> 91
 <211> 119
 <212> PRT
 <213> Artificial Sequence

<400> 91

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

<210> 92
 <211> 119
 <212> PRT
 <213> Artificial Sequence

<400> 92

Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Ala	
1				5					10					15		
Ser	Val	Lys	Ile	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Asn	
		20					25					30				
Phe	Ile	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Ser	Leu	Glu	Trp	Val	
	35					40					45					
Gly	Trp	Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr	Glu	Tyr	Asn	Gln	Lys	Phe	

50		55		60	
Asn	Gly	Arg	Ile	Thr	Ile
65		70		75	
Met	Glu	Leu	Ser	Ser	Leu
		85		90	
Ala	Arg	Gly	Asn	Tyr	Asn
		100		105	
Thr	Leu	Val	Thr	Val	Ser
		115			

<210> 93
 <211> 119
 <212> PRT
 <213> Artificial Sequence

<400> 93

Gln	Met	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Thr	Gly	Ser
1				5					10					15	
Ser	Val	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Asn
			20				25						30		
Phe	Ile	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Ala	Leu	Glu	Trp	Met
		35				40					45				
Gly	Trp	Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr	Glu	Tyr	Asn	Gln	Lys	Phe
	50				55				60						
Asn	Gly	Arg	Val	Thr	Ile	Thr	Arg	Asp	Arg	Ser	Met	Ser	Thr	Ala	Tyr
65				70				75						80	
Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Met	Tyr	Tyr	Cys
			85					90					95		
Ala	Arg	Gly	Asn	Tyr	Asn	Tyr	Glu	Tyr	Phe	Asp	Tyr	Trp	Gly	Gln	Gly
			100				105						110		
Thr	Leu	Val	Thr	Val	Ser	Ser									
			115												

<210> 94
 <211> 119
 <212> PRT
 <213> Artificial Sequence

<400> 94

Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Ser
1				5					10					15	
Ser	Val	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Asn
			20				25						30		
Phe	Ile	His	Trp	Val	Arg	Gln	Gln	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met
		35				40					45				
Gly	Trp	Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr	Glu	Tyr	Asn	Gln	Lys	Phe
	50				55				60						
Asn	Gly	Arg	Val	Thr	Ile	Thr	Ala	Asp	Lys	Ser	Thr	Ser	Thr	Ala	Tyr
65				70				75						80	

Met	Gln	Leu	Ser	Ser	Leu	Thr	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Phe	Cys
				85					90					95	
Ala	Arg	Gly	Asn	Tyr	Asn	Tyr	Glu	Tyr	Phe	Asp	Tyr	Trp	Gly	Gln	Gly
			100					105					110		
Val	Met	Val	Thr	Val	Ser	Ser									
			115												

<210> 95
 <211> 107
 <212> PRT
 <213> Artificial Sequence

<400> 95

Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Phe	Val	Ser	Ala	Ser	Val	Gly
1				5					10					15	
Asp	Arg	Val	Thr	Ile	Thr	Cys	Leu	Ala	Ser	Glu	Asp	Ile	Tyr	Ser	Tyr
			20					25					30		
Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys	Leu	Leu	Ile
		35					40					45			
Phe	Ala	Ala	Asn	Arg	Leu	Gln	Asp	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly
	50					55					60				
Gly	Gly	Ser	Gly	Thr	Gly	Phe	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln	Pro
65					70					75					80
Glu	Asp	Phe	Ala	Thr	Tyr	Phe	Cys	Leu	Gln	Gly	Ser	Lys	Phe	Pro	Tyr
				85					90					95	
Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Asn					
			100					105							

<210> 96
 <211> 107
 <212> PRT
 <213> Artificial Sequence

<400> 96

Asp	Ile	Gln	Leu	Thr	Gln	Ser	Pro	Ala	Phe	Leu	Ser	Ala	Ser	Leu	Gly
1				5					10					15	
Asp	Arg	Val	Thr	Ile	Thr	Cys	Leu	Ala	Ser	Glu	Asp	Ile	Tyr	Ser	Tyr
			20					25					30		
Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys	Leu	Leu	Ile
		35					40					45			
Ser	Ala	Ala	Asn	Arg	Leu	Gln	Asp	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly
	50					55					60				
Ser	Gly	Ser	Gly	Thr	Glu	Phe	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln	Pro
65					70					75					80
Glu	Asp	Phe	Ala	Thr	Tyr	Ser	Cys	Leu	Gln	Gly	Ser	Lys	Phe	Pro	Tyr
				85					90					95	
Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys					
			100					105							

<210> 97
 <211> 107

<212> PRT
<213> Artificial Sequence

<400> 97

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Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1           5           10           15
Asp Arg Val Thr Ile Thr Cys Leu Ala Ser Glu Asp Ile Tyr Ser Tyr
          20          25          30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Gly Pro Lys Leu Leu Ile
          35          40          45
Tyr Ala Ala Asn Arg Leu Gln Asp Gly Val Pro Ser Arg Phe Ser Gly
          50          55          60
Ser Gly Ser Gly Thr Asp Phe Ser Leu Thr Ile Ser Ser Leu Gln Pro
          65          70          75          80
Glu Asp Leu Ala Thr Tyr Tyr Cys Leu Gln Gly Ser Lys Phe Pro Tyr
          85          90          95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
          100          105
```

<210> 98
<211> 107
<212> PRT
<213> Artificial Sequence

<400> 98

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Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1           5           10           15
Asp Thr Val Thr Ile Ala Cys Leu Ala Ser Glu Asp Ile Tyr Ser Tyr
          20          25          30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
          35          40          45
Tyr Ala Ala Asn Arg Leu Gln Asp Gly Val Pro Ser Arg Phe Ser Gly
          50          55          60
Ser Gly Ser Phe Thr Asp Phe Thr Leu Thr Ile Asn Ser Leu Gln Pro
          65          70          75          80
Asp Asp Ser Ala Thr Tyr Tyr Cys Leu Gln Gly Ser Lys Phe Pro Tyr
          85          90          95
Thr Phe Gly Gly Gly Thr Lys Val Asp Ile Lys
          100          105
```

<210> 99
<211> 107
<212> PRT
<213> Artificial Sequence

<400> 99

```
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
 1           5           10           15
Asp Ser Val Thr Ile Glu Cys Leu Ala Ser Glu Asp Ile Tyr Ser Tyr
          20          25          30
```

Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ser	Pro	Lys	Leu	Leu	Ile
		35					40					45			
Phe	Ala	Ala	Asn	Arg	Leu	Gln	Asp	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly
	50					55					60				
Ser	Gly	Ser	Gly	Thr	Gln	Phe	Thr	Leu	Lys	Ile	Ser	Ser	Leu	Gln	Pro
65					70					75					80
Glu	Asp	Phe	Ala	Glu	Tyr	Phe	Cys	Leu	Gln	Ala	Ser	Lys	Phe	Pro	Tyr
			85						90					95	
Thr	Phe	Gly	Pro	Gly	Thr	Lys	Leu	Glu	Leu	Asn					
			100					105							

<210> 100
 <211> 357
 <212> DNA
 <213> Artificial Sequence

<400> 100
 caggttcagc tcgttcagtc tggcgcgga gtcaagaaac caggagcgtc tgtgaaagtg 60
 agttgcaaag catccgggta cacgtttacc cgcaacttca ttactgggt taggcaagca 120
 cctggccaag ggttgagtg gatgggatgg atttttcctg gagatggcga cactgagtac 180
 aaccagaagt tcaatggcag agtgacaatg acacgcgata catccatcag tacagcctac 240
 atggagctat cccggttacg gtccgatgac actgccgtgt actactgtgc cagagggaat 300
 tacaactacg agtacttcga ctattgggga caggggacta tggtaacgt gtcctca 357

<210> 101
 <211> 357
 <212> DNA
 <213> Artificial Sequence

<400> 101
 caggttcagc tgcaagaatc aggcgccgaa gtcaagaaac cgggagcaag cgттаaggtg 60
 agttgtaaag cgtctggcta tacattcacc cgtaatttta tccattgggt gagacaggcc 120
 cctggccagc gcttagagtg gatgggctgg attttccccg gcgacggcga tacggagtat 180
 aaccagaagt tcaatggacg ggtgacaatc acaagagaca ctagcgcctc aaccgcgtac 240
 atggagctga gttccctccg atcagaggat acagccgttt actactgcgc aagggggaat 300
 tacaactacg agtacttcga ctattggggg caggggactc ttgtgacggt ttcgtcc 357

<210> 102
 <211> 357
 <212> DNA
 <213> Artificial Sequence

<400> 102

caagtccagc	tggtacagtc	cggtgctgaa	gtaaagaaac	caggcgcctc	agttaagatc	60
agctgcaagg	cttctgggta	caccttcact	cgcaacttca	tccactgggt	gagacaagcc	120
cctgggcagt	ctctcgaatg	ggttggctgg	atatttcccg	gggacggaga	tactgaatac	180
aacaaaaagt	tcaatggccg	gattaccata	acacgagata	cttctgcgaa	tactgcctat	240
atggaactga	gctctcttaa	aagcgaggac	actgcagtct	actattgcgc	tagagggaat	300
tacaattacg	agtactttga	ctactgggga	cagggaacac	tggtgacagt	tagctcc	357

<210> 103
 <211> 357
 <212> DNA
 <213> Artificial Sequence

<400> 103	
cagatgcagc	tcgtacagag
cggtgccgag	gtgaagaaaa
ccgggagcag	cgttaaagtc
	60
tcctgtaaaag	cctccggcta
cacctttacc	cggaatttca
tccattgggt	acggcaggca
	120
cccggccaag	cactggaatg
gatggggctgg	atattcccgg
gtgacggaga	tactgagtac
	180
aaccagaagt	tcaatggaag
agtgactatt	acgagagatc
gctcaatgag	tactgcgtat
	240
atggaactgt	cctcattgcg
cagcgaagat	acggcgatgt
attactgtgc	acgcgggaac
	300
tacaactacg	agtacttcga
ttactggggc	caagggaccc
ttgtcacggt	ttcatcc
	357

<210> 104
 <211> 357
 <212> DNA
 <213> Artificial Sequence

<400> 104	
caggttcaac	tggttcagtc
aggtgcagag	gtaaagaagc
caggagctc	agtgaaagtc
	60
tcatgcaaag	ccagcggata
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tccactgggt	gagacagcag
	120
cctgggcaag	gcttggagtg
gatgggctgg	atctttccag
gcatgggaga	caccgagtat
	180
aaccagaagt	tcaatggcag
agtgactatt	accgccgata
aaagcacatc	tacagcctat
	240
atgcagctga	gcagcctgac
aagtgaagat	accgccgtct
acttctgtgc	cagaggcaac
	300
tacaactacg	agtatttcga
ctactggggg	caggggggtaa
tggtcacggt	gagcagt
	357

<210> 105
 <211> 321
 <212> DNA
 <213> Artificial Sequence

<400> 105
gacatccaga tgaccaatc cccttcattc gtgagtgcct cagtgggcga cagagtcacc 60
attacgtgtc ttgcttcaga ggacatttac agctatctcg catggtatca gcagaaacct 120
gggaaagcac ccaaactgct gatattcgct gccaatcggc tgcaagatgg cgtaccatcc 180
aggttttctg gaggaggatc tgggtactggg tttaccctga ctatcagctc ctttcagccc 240
gaggattttg ccacatactt ctgcctccaa ggcagcaa at tcccgtacac atttgggcag 300
ggtaccaagc tggagatcaa c 321

<210> 106
<211> 321
<212> DNA
<213> Artificial Sequence

<400> 106
gacattcagc tcactcagag tcctgcgttt ctgtccgcat cacttggcga cagagtcacc 60
atcacttgct tggccagtga ggacatctac agctatctgg cttggtacca gcagaaaccc 120
ggaaaagccc cgaagctggt gatctctgct gcgaatcggc tgcaagatgg agtaccatca 180
cgcttctcag gctctggaag cggtagacag ttcaccctta ccattagctc tctccaaccc 240
gaagattttg ccacctactc ttgcctgcaa gggagcaa at tcccctatac ctttggccaa 300
gggaccaa ac tggagattaa g 321

<210> 107
<211> 321
<212> DNA
<213> Artificial Sequence

<400> 107
gacattcagc tgaccagtc accaagctca ctgagtgcct ctgtgggtga tcgtgtgacg 60
attacttgcc tggctagtga ggacatctac agctacttgg cctggtatca gcagaaacct 120
gggaaaggcc ccaagctgct gatctacgct gccaataggc tgcaagacgg ggtacctagc 180
cgcttttccg gatctggctc aggcacagac ttcagcctta ccatatccag cctccaacca 240
gaggatcttg ccacctatta ctgccttcag ggctccaagt ttccctacac gtttggaggt 300
ggtactaagg tggagatcaa a 321

<210> 108
<211> 321
<212> DNA

<213> Artificial Sequence

<400> 108

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gacatccaga tgactcaatc cccaagcagt ctgagcgcct ctgtaggcga taccgtgacg      60
attgcgtgtc tggcttccga ggacatctac agttacctcg catggtatca gcagaaaccg      120
gggaaagcac ctaagctgct gatttatgcg gctaacagac tgcaggatgg cgtacccagt      180
cgcttctcag gttccggcag ctttaccgac tttaccctga ccatcaacag ctttcagccc      240
gatgatagcg ccacttacta ctgtctgcaa ggctctaagt tcccctatac gtttggagga      300
ggcactaagg tcgacataaa g                                             321
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<210> 109

<211> 321

<212> DNA

<213> Artificial Sequence

<400> 109

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gatatccaga tgacacagag ccctagcagc gttagcgcac cagtagggga cagtgtgacc      60
attgaatgcc ttgcaagcga ggacatctac agctatttgg cgtggtatca gcaaaagcca      120
ggcaaatctc ccaaactgct cattttcgcc gccaataggc tccaagatgg tgtcccttcc      180
cgattttccg ggtcaggctc aggaaccagc ttcacactga agatttcctc tcttcagcca      240
gaggactttg cagagtactt ctgtctccag gccagtaagt ttcctacac ctttgggcct      300
ggaacgaaac tggaactgaa t                                             321
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<210> 110

<211> 472

<212> PRT

<213> Artificial Sequence

<400> 110

```
Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu Val Lys Pro Thr Glu
 1             5             10            15
Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Tyr Ser Ile Thr Ser Asp
      20             25             30
Tyr Ala Trp Asn Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu Trp
      35             40             45
Leu Ala Tyr Ile Ser Tyr Ser Gly Ser Thr Ser Tyr Asn Pro Ser Leu
      50             55             60
Lys Ser Arg Leu Ser Ile Thr Lys Asp Thr Ser Lys Ser Gln Val Val
      65             70             75            80
Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr Cys
      85             90            95
```

$\langle 210 \rangle$	111
$\langle 211 \rangle$	219
$\langle 212 \rangle$	PRT
$\langle 213 \rangle$	Artificial Sequence

<400> 111

```

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

```

<210> 112

<211> 468

<212> PRT

<213> Artificial Sequence

<400> 112

```

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

```


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

<210> 114
 <211> 471
 <212> PRT
 <213> Artificial Sequence

<400> 114

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

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

<210> 116
 <211> 474
 <212> PRT
 <213> Artificial Sequence

<400> 116

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

Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp
145					150					155					160
Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu
				165					170						175
Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser
			180					185						190	
Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro
		195					200					205			
Ser	Asn	Thr	Lys	Val	Asp	Lys	Arg	Val	Glu	Pro	Lys	Ser	Cys	Gly	Gly
	210					215					220				
Gly	Gly	Ser	Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Gly	Gly	Val	Val	Gln
225					230					235					240
Pro	Gly	Arg	Ser	Leu	Arg	Leu	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe
				245					250						255
Thr	Arg	Tyr	Thr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu
			260					265					270		
Glu	Trp	Ile	Gly	Tyr	Ile	Asn	Pro	Ser	Arg	Gly	Tyr	Thr	Asn	Tyr	Asn
		275					280					285			
Gln	Lys	Val	Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn
	290					295					300				
Thr	Ala	Phe	Leu	Gln	Met	Asp	Ser	Leu	Arg	Pro	Glu	Asp	Thr	Gly	Val
305					310					315					320
Tyr	Phe	Cys	Ala	Arg	Tyr	Tyr	Asp	Asp	His	Tyr	Ser	Leu	Asp	Tyr	Trp
				325					330					335	
Gly	Gln	Gly	Thr	Pro	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Gly
			340					345					350		
Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Asp	Ile	Gln	Met	Thr	Gln	Ser
		355					360					365			
Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly	Asp	Arg	Val	Thr	Ile	Thr	Cys
	370					375					380				
Ser	Ala	Ser	Ser	Ser	Val	Ser	Tyr	Met	Asn	Trp	Tyr	Gln	Gln	Thr	Pro
385					390					395					400
Gly	Lys	Ala	Pro	Lys	Arg	Trp	Ile	Tyr	Asp	Thr	Ser	Lys	Leu	Ala	Ser
				405					410					415	
Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Thr
			420					425					430		
Phe	Thr	Ile	Ser	Ser	Leu	Gln	Pro	Glu	Asp	Ile	Ala	Thr	Tyr	Tyr	Cys
		435					440					445			
Gln	Gln	Trp	Ser	Ser	Asn	Pro	Phe	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu
	450					455					460				
Gln	Ile	Thr	Arg	His	His	His	His	His	His						
465					470										

<210> 117
 <211> 474
 <212> PRT
 <213> Artificial Sequence

<400> 117

Gln	Val	Gln	Leu	Gln	Glu	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	Arg	Asn

			20					25					30				
Phe	Ile	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Arg	Leu	Glu	Trp	Met		
		35					40					45					
Gly	Trp	Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr	Glu	Tyr	Asn	Gln	Lys	Phe		
	50					55					60						
Asn	Gly	Arg	Val	Thr	Ile	Thr	Arg	Asp	Thr	Ser	Ala	Ser	Thr	Ala	Tyr		
65					70					75					80		
Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys		
			85						90					95			
Ala	Arg	Gly	Asn	Tyr	Asn	Tyr	Glu	Tyr	Phe	Asp	Tyr	Trp	Gly	Gln	Gly		
			100					105					110				
Thr	Leu	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe		
	115						120					125					
Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu		
	130					135					140						
Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp		
145					150					155					160		
Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu		
				165					170					175			
Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser		
			180					185					190				
Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro		
	195						200					205					
Ser	Asn	Thr	Lys	Val	Asp	Lys	Arg	Val	Glu	Pro	Lys	Ser	Cys	Gly	Gly		
	210					215					220						
Gly	Gly	Ser	Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Gly	Gly	Val	Val	Gln		
225					230					235					240		
Pro	Gly	Arg	Ser	Leu	Arg	Leu	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe		
				245					250					255			
Thr	Arg	Tyr	Thr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu		
			260					265					270				
Glu	Trp	Ile	Gly	Tyr	Ile	Asn	Pro	Ser	Arg	Gly	Tyr	Thr	Asn	Tyr	Asn		
	275						280					285					
Gln	Lys	Val	Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn		
	290					295					300						
Thr	Ala	Phe	Leu	Gln	Met	Asp	Ser	Leu	Arg	Pro	Glu	Asp	Thr	Gly	Val		
305					310					315					320		
Tyr	Phe	Cys	Ala	Arg	Tyr	Tyr	Asp	Asp	His	Tyr	Ser	Leu	Asp	Tyr	Trp		
				325					330					335			
Gly	Gln	Gly	Thr	Pro	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Gly		
			340					345					350				
Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Asp	Ile	Gln	Met	Thr	Gln	Ser		
	355						360					365					
Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly	Asp	Arg	Val	Thr	Ile	Thr	Cys		
	370					375					380						
Ser	Ala	Ser	Ser	Ser	Val	Ser	Tyr	Met	Asn	Trp	Tyr	Gln	Gln	Thr	Pro		
385					390					395					400		
Gly	Lys	Ala	Pro	Lys	Arg	Trp	Ile	Tyr	Asp	Thr	Ser	Lys	Leu	Ala	Ser		
				405					410					415			
Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Thr		
			420					425					430				
Phe	Thr	Ile	Ser	Ser	Leu	Gln	Pro	Glu	Asp	Ile	Ala	Thr	Tyr	Tyr	Cys		
	435						440					445					

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
 450 455 460
 Gln Ile Thr Arg His His His His His His
 465 470

<210> 118
 <211> 474
 <212> PRT
 <213> Artificial Sequence

<400> 118

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
 20 25 30
 Phe Ile His Trp Val Arg Gln Ala Pro Gly Gln Ser Leu Glu Trp Val
 35 40 45
 Gly Trp Ile Phe Pro Gly Asp Gly Asp Thr Glu Tyr Asn Gln Lys Phe
 50 55 60
 Asn Gly Arg Ile Thr Ile Thr Arg Asp Thr Ser Ala Asn Thr Ala Tyr
 65 70 75 80
 Met Glu Leu Ser Ser Leu Lys Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
 100 105 110
 Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys Gly Gly
 210 215 220
 Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Gly Gly Val Val Gln
 225 230 235 240
 Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
 245 250 255
 Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
 260 265 270
 Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
 275 280 285
 Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
 290 295 300
 Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
 305 310 315 320
 Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp

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

<210> 119

<211> 474

<212> PRT

<213> Artificial Sequence

<400> 119

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

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

<210> 120
 <211> 474
 <212> PRT
 <213> Artificial Sequence

<400> 120

Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Ser
1				5					10					15	
Ser	Val	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Asn
			20					25					30		
Phe	Ile	His	Trp	Val	Arg	Gln	Gln	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met
		35					40					45			
Gly	Trp	Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr	Glu	Tyr	Asn	Gln	Lys	Phe
	50					55					60				
Asn	Gly	Arg	Val	Thr	Ile	Thr	Ala	Asp	Lys	Ser	Thr	Ser	Thr	Ala	Tyr
65					70					75					80
Met	Gln	Leu	Ser	Ser	Leu	Thr	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Phe	Cys

				85					90					95			
Ala	Arg	Gly	Asn	Tyr	Asn	Tyr	Glu	Tyr	Phe	Asp	Tyr	Trp	Gly	Gln	Gly		
			100					105					110				
Val	Met	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe		
		115					120					125					
Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu		
		130				135					140						
Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp		
145					150					155					160		
Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu		
				165				170						175			
Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser		
			180					185					190				
Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro		
		195					200					205					
Ser	Asn	Thr	Lys	Val	Asp	Lys	Arg	Val	Glu	Pro	Lys	Ser	Cys	Gly	Gly		
		210				215					220						
Gly	Gly	Ser	Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Gly	Gly	Val	Val	Gln		
225					230					235					240		
Pro	Gly	Arg	Ser	Leu	Arg	Leu	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe		
				245				250						255			
Thr	Arg	Tyr	Thr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu		
			260					265					270				
Glu	Trp	Ile	Gly	Tyr	Ile	Asn	Pro	Ser	Arg	Gly	Tyr	Thr	Asn	Tyr	Asn		
		275				280						285					
Gln	Lys	Val	Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn		
		290				295				300							
Thr	Ala	Phe	Leu	Gln	Met	Asp	Ser	Leu	Arg	Pro	Glu	Asp	Thr	Gly	Val		
305					310					315					320		
Tyr	Phe	Cys	Ala	Arg	Tyr	Tyr	Asp	Asp	His	Tyr	Ser	Leu	Asp	Tyr	Trp		
				325				330						335			
Gly	Gln	Gly	Thr	Pro	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Gly		
			340					345					350				
Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Asp	Ile	Gln	Met	Thr	Gln	Ser		
		355					360					365					
Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly	Asp	Arg	Val	Thr	Ile	Thr	Cys		
		370				375					380						
Ser	Ala	Ser	Ser	Ser	Val	Ser	Tyr	Met	Asn	Trp	Tyr	Gln	Gln	Thr	Pro		
385					390					395					400		
Gly	Lys	Ala	Pro	Lys	Arg	Trp	Ile	Tyr	Asp	Thr	Ser	Lys	Leu	Ala	Ser		
				405				410						415			
Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Thr		
			420					425					430				
Phe	Thr	Ile	Ser	Ser	Leu	Gln	Pro	Glu	Asp	Ile	Ala	Thr	Tyr	Tyr	Cys		
		435					440					445					
Gln	Gln	Trp	Ser	Ser	Asn	Pro	Phe	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu		
		450				455					460						
Gln	Ile	Thr	Arg	His	His	His	His	His	His								
465					470												

<210> 121

<211> 214

<212> PRT

<213> Artificial Sequence

<400> 121

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

<210> 122

<211> 214

<212> PRT

<213> Artificial Sequence

<400> 122

```
Asp Ile Gln Leu Thr Gln Ser Pro Ala Phe Leu Ser Ala Ser Leu Gly
 1           5           10           15
Asp Arg Val Thr Ile Thr Cys Leu Ala Ser Glu Asp Ile Tyr Ser Tyr
          20           25           30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
          35           40           45
Ser Ala Ala Asn Arg Leu Gln Asp Gly Val Pro Ser Arg Phe Ser Gly
          50           55           60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
          65           70           75           80
Glu Asp Phe Ala Thr Tyr Ser Cys Leu Gln Gly Ser Lys Phe Pro Tyr
          85           90           95
Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala
```

			100					105				110			
Pro	Ser	Val	Phe	Ile	Phe	Pro	Pro	Ser	Asp	Glu	Gln	Leu	Lys	Ser	Gly
		115					120					125			
Thr	Ala	Ser	Val	Val	Cys	Leu	Leu	Asn	Asn	Phe	Tyr	Pro	Arg	Glu	Ala
	130					135					140				
Lys	Val	Gln	Trp	Lys	Val	Asp	Asn	Ala	Leu	Gln	Ser	Gly	Asn	Ser	Gln
145					150					155					160
Glu	Ser	Val	Thr	Glu	Gln	Asp	Ser	Lys	Asp	Ser	Thr	Tyr	Ser	Leu	Ser
			165						170					175	
Ser	Thr	Leu	Thr	Leu	Ser	Lys	Ala	Asp	Tyr	Glu	Lys	His	Lys	Val	Tyr
			180					185					190		
Ala	Cys	Glu	Val	Thr	His	Gln	Gly	Leu	Ser	Ser	Pro	Val	Thr	Lys	Ser
	195						200					205			
Phe	Asn	Arg	Gly	Glu	Cys										
	210														

<210> 123
 <211> 214
 <212> PRT
 <213> Artificial Sequence

<400> 123

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

<210> 124

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

<400> 124

```

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

```

<210> 125
 <211> 214
 <212> PRT
 <213> Artificial Sequence

<400> 125

```

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
 1           5           10           15
Asp Ser Val Thr Ile Glu Cys Leu Ala Ser Glu Asp Ile Tyr Ser Tyr
           20           25           30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ser Pro Lys Leu Leu Ile
           35           40           45
Phe Ala Ala Asn Arg Leu Gln Asp Gly Val Pro Ser Arg Phe Ser Gly
           50           55           60
Ser Gly Ser Gly Thr Gln Phe Thr Leu Lys Ile Ser Ser Leu Gln Pro
           65           70           75           80
Glu Asp Phe Ala Glu Tyr Phe Cys Leu Gln Ala Ser Lys Phe Pro Tyr

```

				85					90					95			
Thr	Phe	Gly	Pro	Gly	Thr	Lys	Leu	Glu	Leu	Asn	Arg	Thr	Val	Ala	Ala		
			100					105					110				
Pro	Ser	Val	Phe	Ile	Phe	Pro	Pro	Ser	Asp	Glu	Gln	Leu	Lys	Ser	Gly		
		115					120					125					
Thr	Ala	Ser	Val	Val	Cys	Leu	Leu	Asn	Asn	Phe	Tyr	Pro	Arg	Glu	Ala		
	130					135					140						
Lys	Val	Gln	Trp	Lys	Val	Asp	Asn	Ala	Leu	Gln	Ser	Gly	Asn	Ser	Gln		
145					150					155					160		
Glu	Ser	Val	Thr	Glu	Gln	Asp	Ser	Lys	Asp	Ser	Thr	Tyr	Ser	Leu	Ser		
			165					170					175				
Ser	Thr	Leu	Thr	Leu	Ser	Lys	Ala	Asp	Tyr	Glu	Lys	His	Lys	Val	Tyr		
			180					185					190				
Ala	Cys	Glu	Val	Thr	His	Gln	Gly	Leu	Ser	Ser	Pro	Val	Thr	Lys	Ser		
		195					200					205					
Phe	Asn	Arg	Gly	Glu	Cys												
	210																

<210> 126
 <211> 17
 <212> PRT
 <213> Artificial Sequence

<400> 126

Trp	Ile	Phe	Pro	Gly	Asp	Ala	Asp	Thr	Glu	Tyr	Asn	Gln	Lys	Phe	Ser
1				5					10					15	

Gly

<210> 127
 <211> 7
 <212> PRT
 <213> Artificial Sequence

<400> 127

Ala	Ala	Asn	Arg	Leu	Gln	Ser
1				5		

<210> 128
 <211> 17
 <212> PRT
 <213> Artificial Sequence

<400> 128

Tyr	Ile	Asn	Pro	Ser	Met	Gly	Ala	Thr	Asn	Tyr	Asn	Gln	Lys	Val	Lys
1				5					10					15	

Asp

<210> 129
<211> 10
<212> PRT
<213> Artificial Sequence

<400> 129

Tyr Tyr Asn Asp His Tyr Ser Leu Asp Tyr
1 5 10

<210> 130
<211> 10
<212> PRT
<213> Artificial Sequence

<400> 130

Tyr Tyr Asp Asp His Phe Ser Leu Asp Tyr
1 5 10

<210> 131
<211> 10
<212> PRT
<213> Artificial Sequence

<400> 131

Ser Ala Ser Ser Ser Val Ala Tyr Met Asn
1 5 10

<210> 132
<211> 7
<212> PRT
<213> Artificial Sequence

<400> 132

Asn Thr Ser Lys Leu Ala Ser
1 5

<210> 133
<211> 119
<212> PRT

<213> Artificial Sequence

<400> 133

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

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

Ser Gly Arg Val Thr Ile Thr Arg Asp Arg Ser Met Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser
115

<210> 134

<211> 119

<212> PRT

<213> Artificial Sequence

<400> 134

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

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

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

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Met Val Thr Val Ser Ser
115

<210> 135
<211> 119
<212> PRT
<213> Artificial Sequence

<400> 135

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

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

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

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Met Val Thr Val Ser Ser
115

<210> 136
<211> 119
<212> PRT
<213> Artificial Sequence

<400> 136

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

Gly Trp Ile Phe Pro Gly Asp Gly Asp Thr Glu Tyr Asn Gln Lys Phe
50 55 60

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

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Met Val Thr Val Ser Ser
115

<210> 137
<211> 107
<212> PRT
<213> Artificial Sequence

<400> 137

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

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

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

Phe Ala Ala Asn Arg Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Ala Thr Tyr Phe Cys Leu Gln Gly Ser Lys Phe Pro Tyr
85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Asn
100 105

<210> 138
<211> 107
<212> PRT
<213> Artificial Sequence

<400> 138

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

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

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

Phe Ala Ala Asn Arg Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Gly Gly Ser Gly Thr Gly Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro

65					70					75				80	
Glu	Asp	Phe	Ala	Thr	Tyr	Phe	Cys	Leu	Gln	Gly	Ser	Lys	Phe	Pro	Tyr
				85					90					95	

Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys
			100					105		

<210> 139
 <211> 107
 <212> PRT
 <213> Artificial Sequence

<400> 139

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

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

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

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

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

Glu	Asp	Phe	Ala	Thr	Tyr	Phe	Cys	Leu	Gln	Gly	Ser	Lys	Phe	Pro	Tyr
				85					90					95	

Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys
			100					105		

<210> 140
 <211> 107
 <212> PRT
 <213> Artificial Sequence

<400> 140

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 Leu Ala Ser Glu Asp Ile Tyr Ser Tyr
20 25 30

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

Phe Ala Ala Asn Arg Leu Gln Asp 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

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Gly Ser Lys Phe Pro Tyr
85 90 95

Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
100 105

<210> 141
<211> 107
<212> PRT
<213> Artificial Sequence

<400> 141

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 Leu Ala Ser Glu Asp Ile Tyr Ser Tyr
20 25 30

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

Phe Ala Ala Asn Arg Leu Gln 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

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Gly Ser Lys Phe Pro Tyr
85 90 95

Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
100 105

<210> 142
<211> 357
<212> DNA
<213> Artificial Sequence

<400> 142
caaatgcagc tcgtacagtc gggagcagaa gtcaagaaga ccggcagctc agttaaggtg 60
tcgtgcaaag cctctggata tacattcacg cggaatttca ttactgggt gagacaggca 120
ccaggccagg ccttggaatg gatgggctgg atttttcctg gggatgccga cacagagtat 180
aaccagaaat tctcgggcag ggtaacaatt actcgggata gatcaatgtc tacggcgtat 240
atggagctca gcagcctgag atccgaagat acagccatgt attactgtgc cagaggcaat 300
tacaattatg agtacttcga ctattggggc caaggacac tggtcaccgt ttcattcc 357

<210> 143
<211> 357
<212> DNA
<213> Artificial Sequence

<400> 143
caagttcagc tgggtcaatc tggggctgaa gtcaagaagc ctgggtcctc agtgaaagtt 60
tcctgcaagg cttctggcta caccttcacc cgtaacttta tccactggat cagacaggca 120
cctggacaag gccttgagtg gattgggtgg atttttcctg gagatgcaga tacagagtac 180
aatcaaaagt tcagtgggag agcaacaatc acagcagaca aatcaaccag cacagcctat 240
atggagctca gcagcctgag atctgaggac actgcagtct attactgtgc aagaggaaat 300
tacaactacg agtactttga ttactggggc caaggaacca tggtcacagt ctcctca 357

<210> 144
<211> 357
<212> DNA
<213> Artificial Sequence

<400> 144
caagttcagc tggttcaatc tggggctgaa gtcaagaagc ctgggtcctc agtgaaagtt 60
tcctgcaagg cttctggcta caccttcacc cgtaacttta tccactggat cagacaggca 120
cctggacaag gccttgagtg gattgggtgg atttttcctg gagatgcaga tacagagtac 180
aatcaaaaagt tcagtgggag agtgacaatc acagcagaca aatcaaccag cacagcctat 240
atggagctca gcagcctgag atctgaggac actgcagtct attactgtgc aagaggaaat 300
tacaactacg agtactttga ttactggggc caaggaacca tggtcacagt ctcctca 357

<210> 145
<211> 357
<212> DNA
<213> Artificial Sequence

<400> 145
caagttcagc tggttcaatc tggggctgaa gtcaagaagc ctgggtcctc agtgaaagtt 60
tcctgcaagg cttctggcta caccttcacc cgtaacttta tccactggat cagacaggca 120
cctggacaag gccttgagtg gattgggtgg atttttcctg gagatggaga tacagagtac 180
aatcaaaaagt tcaatgggag agcaacaatc acagcagaca aatcaaccag cacagcctat 240
atggagctca gcagcctgag atctgaggac actgcagtct attactgtgc aagaggaaat 300
tacaactacg agtactttga ttactggggc caaggaacca tggtcacagt ctcctca 357

<210> 146
<211> 321
<212> DNA
<213> Artificial Sequence

<400> 146
gacatccaga tgaccaatc cccttcattc gtgagtgcct cagtgggcga cagagtcacc 60
attacgtgtc ttgcttcaga ggacatttac agctatctcg catggtatca gcagaaacct 120
gggaaagcac ccaaactgct gatattcgct gccaatcggc tgcaaagcgg cgtaccatcc 180
aggttttctg gaggaggatc tgggtactggg tttaccctga ctatcagctc ctttcagccc 240
gaggattttg ccacatactt ctgcctccaa ggcagcaa at tcccgtacac atttgggcag 300
ggtaccaagc tggagatcaa c 321

<210> 147

<211> 321
<212> DNA
<213> Artificial Sequence

<400> 147
gacatccaga tgaccaatc cccttcattc gtgagtgctt cagtgggcga cagagtcacc 60
attacgtgtc ttgcttcaga ggacatttac agctatctcg catggtatca gcagaaacct 120
gggaaagcac ccaaactgct gatattcgct gccaatcggc tgcaaagcgg cgtaccatcc 180
aggttttctg gaggaggatc tgggtactggg tttaccctga ctatcagctc ctttcagccc 240
gaggattttg ccacatactt ctgcctccaa ggcagcaaatt tcccgtacac atttgggcag 300
ggtaccaagc tggagatcaa g 321

<210> 148
<211> 321
<212> DNA
<213> Artificial Sequence

<400> 148
gacatccaga tgaccaatc cccttcattc gtgagtgctt cagtgggcga cagagtcacc 60
attacgtgtc ttgcttcaga ggacatttac agctatctcg catggtatca gcagaaacct 120
gggaaagcac ccaaactgct gatattcgct gccaatcggc tgcaagatgg cgtaccatcc 180
aggttttctg gaggaggatc tgggtactggg tttaccctga ctatcagctc ctttcagccc 240
gaggattttg ccacatactt ctgcctccaa ggcagcaaatt tcccgtacac atttgggcag 300
ggtaccaagc tggagatcaa g 321

<210> 149
<211> 321
<212> DNA
<213> Artificial Sequence

<400> 149
gacatccaga tgacacagtc tccatcttcc ctgtctgcat ctgtgggaga cagagtcacc 60
atcacttgtc tggcaagcga ggacatttac agttatcttg catggtatca acagaagcca 120
gggaaagctc ctaagctcct gatctttgct gcaaataaggc tgcaagatgg ggtcccatca 180
cggttcagtg gcagtggatc tggcacagac tttactctca ccatcagcag tctgcaacct 240
gaagatttcg caacttatta ctgtcttcag ggttccaagt ttccctacac ctttggacct 300

gggaccaagg tggacatcaa a 321

<210> 150
<211> 321
<212> DNA
<213> Artificial Sequence

<400> 150
gacatccaga tgacacagtc tccatcttcc ctgtctgcat ctgtgggaga cagagtcacc 60
atcacttgtc tggcaagcga ggacatttac agttatcttg catggtatca acagaagcca 120
gggaaagctc ctaagctcct gatctttgct gcaaataaggc tgcaaagcgg ggtcccatca 180
cggttcagtg gcagtggatc tggcacagac tttactctca ccatcagcag tctgcaacct 240
gaagatttcg caacttatta ctgtcttcag ggttccaagt ttccctacac ctttggaacct 300
gggaccaagg tggacatcaa a 321

<210> 151
<211> 695
<212> PRT
<213> Artificial Sequence

<400> 151
Gln Met Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Thr Gly Ser
1 5 10 15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30
Phe Ile His Trp Val Arg Gln Ala Pro Gly Gln Ala Leu Glu Trp Met
35 40 45
Gly Trp Ile Phe Pro Gly Asp Gly Asp Thr Glu Tyr Asn Gln Lys Phe
50 55 60
Asn Gly Arg Val Thr Ile Thr Arg Asp Arg Ser Met Ser Thr Ala Tyr
65 70 75 80
Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Met Tyr Tyr Cys
85 90 95

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val

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

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
595 600 605

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
675 680 685

Leu Ser Leu Ser Pro Gly Lys
690 695

<210> 152
<211> 695
<212> PRT
<213> Artificial Sequence

<400> 152

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

Gly Trp Ile Phe Pro Gly Asp Gly Asp Thr Glu Tyr Asn Gln Lys Phe
50 55 60

Asn Gly Arg Val Thr Ile Thr Arg Asp Arg Ser Met Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys Gly Gly

210

215

220

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
 245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
 260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
 275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
 290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
 305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
 325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
 340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
 355 360 365

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

Ser Ala Ser Ser Ser Val Ala Tyr Met Asn Trp Tyr Gln Gln Thr Pro
 385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
 405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
 420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
595 600 605

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
675 680 685

Leu Ser Leu Ser Pro Gly Lys
690 695

<210> 153
<211> 695
<212> PRT
<213> Artificial Sequence

<400> 153

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

Gly Trp Ile Phe Pro Gly Asp Gly Asp Thr Glu Tyr Asn Gln Lys Phe
50 55 60

Asn Gly Arg Val Thr Ile Thr Arg Asp Arg Ser Met Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

115

120

125

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
 245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
 260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
 275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
 290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
 305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
 325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
355 360 365

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asn Thr Ser Lys Leu Ala Ser
405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
595 600 605

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
675 680 685

Leu Ser Leu Ser Pro Gly Lys
690 695

<210> 154
<211> 695
<212> PRT
<213> Artificial Sequence

<400> 154

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn

20

25

30

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

Gly Trp Ile Phe Pro Gly Asp Gly Asp Thr Glu Tyr Asn Gln Lys Phe
 50 55 60

Asn Gly Arg Val Thr Ile Thr Arg Asp Arg Ser Met Ser Thr Ala Tyr
 65 70 75 80

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
 100 105 110

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

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asn Asp His Tyr Ser Leu Asp Tyr Trp
325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
355 360 365

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
595 600 605

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
675 680 685

Leu Ser Leu Ser Pro Gly Lys
690 695

<210> 155
<211> 695
<212> PRT
<213> Artificial Sequence

<400> 155

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

Gly Trp Ile Phe Pro Gly Asp Gly Asp Thr Glu Tyr Asn Gln Lys Phe
50 55 60

Asn Gly Arg Val Thr Ile Thr Arg Asp Arg Ser Met Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Phe Ser Leu Asp Tyr Trp
325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
355 360 365

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
595 600 605

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
675 680 685

Leu Ser Leu Ser Pro Gly Lys
690 695

<210> 156
<211> 695
<212> PRT
<213> Artificial Sequence

<400> 156

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

Gly Trp Ile Phe Pro Gly Asp Gly Asp Thr Glu Tyr Asn Gln Lys Phe
50 55 60

Asn Gly Arg Val Thr Ile Thr Arg Asp Arg Ser Met Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Met Gly Ala Thr Asn Tyr Asn
275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
355 360 365

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
595 600 605

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
660 665 670

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

675

680

685

Leu Ser Leu Ser Pro Gly Lys
690 695

<210> 157

<211> 695

<212> PRT

<213> Artificial Sequence

<400> 157

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

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

Ser Gly Arg Val Thr Ile Thr Arg Asp Arg Ser Met Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
355 360 365

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg

580

585

590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
 595 600 605

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
 610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
 625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
 645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
 660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
 675 680 685

Leu Ser Leu Ser Pro Gly Lys
 690 695

<210> 158
 <211> 695
 <212> PRT
 <213> Artificial Sequence

<400> 158

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
 20 25 30

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

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

Ser Gly Arg Val Thr Ile Thr Arg Asp Arg Ser Met Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
355 360 365

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

Ser Ala Ser Ser Ser Val Ala Tyr Met Asn Trp Tyr Gln Gln Thr Pro
385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys

485

490

495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
 500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
 515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
 530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
 545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
 565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
 580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
 595 600 605

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
 610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
 625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
 645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
 660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
 675 680 685

Leu Ser Leu Ser Pro Gly Lys
 690 695

<210> 159
 <211> 695
 <212> PRT
 <213> Artificial Sequence

<400> 159

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
 20 25 30

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

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

Ser Gly Arg Val Thr Ile Thr Arg Asp Arg Ser Met Ser Thr Ala Tyr
 65 70 75 80

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
 100 105 110

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

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
355 360 365

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro

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

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
675 680 685

Leu Ser Leu Ser Pro Gly Lys
690 695

<210> 160
<211> 695
<212> PRT
<213> Artificial Sequence

<400> 160

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

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

Ser Gly Arg Val Thr Ile Thr Arg Asp Arg Ser Met Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn

290

295

300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
 305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asn Asp His Tyr Ser Leu Asp Tyr Trp
 325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
 340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
 355 360 365

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
 385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
 405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
 420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
 435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
 450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
 465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
 485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
 500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
595 600 605

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
675 680 685

Leu Ser Leu Ser Pro Gly Lys
690 695

<210> 161
<211> 695
<212> PRT

<213> Artificial Sequence

<400> 161

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

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

Ser Gly Arg Val Thr Ile Thr Arg Asp Arg Ser Met Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

195

200

205

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
 245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
 260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
 275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
 290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
 305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Phe Ser Leu Asp Tyr Trp
 325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
 340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
 355 360 365

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
 385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
 405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
595 600 605

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
675 680 685

Leu Ser Leu Ser Pro Gly Lys
690 695

<210> 162
<211> 695
<212> PRT
<213> Artificial Sequence

<400> 162

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

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

Ser Gly Arg Val Thr Ile Thr Arg Asp Arg Ser Met Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly

100

105

110

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

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
 245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
 260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Met Gly Ala Thr Asn Tyr Asn
 275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
 290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
 305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
355 360 365

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
595 600 605

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
675 680 685

Leu Ser Leu Ser Pro Gly Lys
690 695

<210> 163
<211> 449
<212> PRT
<213> Artificial Sequence

<400> 163

Gln Met Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Thr Gly Ser

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

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
 225 230 235 240

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
 245 250 255

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
 260 265 270

Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
 275 280 285

Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
 290 295 300

Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
 305 310 315 320

Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
 325 330 335

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

Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr
 355 360 365

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
 370 375 380

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
 385 390 395 400

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
 405 410 415

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
 420 425 430

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
435 440 445

Lys

<210> 164
<211> 449
<212> PRT
<213> Artificial Sequence

<400> 164

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

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

Ser Gly Arg Val Thr Ile Thr Arg Asp Arg Ser Met Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp

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

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
 370 375 380

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
 385 390 395 400

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
 405 410 415

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
 420 425 430

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
 435 440 445

Lys

<210> 165
 <211> 214
 <212> PRT
 <213> Artificial Sequence

<400> 165

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

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

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

Phe Ala Ala Asn Arg Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60

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

Glu Asp Phe Ala Thr Tyr Phe Cys Leu Gln Gly Ser Lys Phe Pro Tyr
85 90 95

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

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

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

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

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

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

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

Phe Asn Arg Gly Glu Cys
210

<210> 166
<211> 214
<212> PRT
<213> Artificial Sequence

<400> 166

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

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

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

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

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

Glu Asp Phe Ala Thr Tyr Phe Cys Leu Gln Gly Ser Lys Phe Pro Tyr
85 90 95

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

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

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

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

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

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

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

Phe Asn Arg Gly Glu Cys
210

<210> 167
<211> 214
<212> PRT
<213> Artificial Sequence

<400> 167

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

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

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

Phe Ala Ala Asn Arg Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60

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

Glu Asp Phe Ala Thr Tyr Phe Cys Leu Gln Gly Ser Lys Phe Pro Tyr
 85 90 95

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

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

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

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

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

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

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

Phe Asn Arg Gly Glu Cys

210

<210> 168
<211> 465
<212> PRT
<213> Artificial Sequence

<400> 168

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

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

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

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

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

Glu Asp Phe Ala Thr Tyr Phe Cys Leu Gln Gly Ser Lys Phe Pro Tyr
85 90 95

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

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

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

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

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

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

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

Phe Asn Arg Gly Glu Cys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
210 215 220

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

Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Tyr
245 250 255

Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile
260 265 270

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

Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Ala Phe
290 295 300

Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val Tyr Phe Cys
305 310 315 320

Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp Gly Gln Gly
325 330 335

Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
340 345 350

Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser
355 360 365

Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Ser Ala Ser
370 375 380

Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro Gly Lys Ala
385 390 395 400

Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser Gly Val Pro
405 410 415

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Phe Thr Ile
420 425 430

Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Trp
435 440 445

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

Arg
465

<210> 169
<211> 465
<212> PRT
<213> Artificial Sequence

<400> 169

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

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

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

Phe Ala Ala Asn Arg Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Ala Thr Tyr Phe Cys Leu Gln Gly Ser Lys Phe Pro Tyr
85 90 95

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

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

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

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

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

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

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

Phe Asn Arg Gly Glu Cys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
210 215 220

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

Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Tyr
245 250 255

Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile
260 265 270

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

Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Ala Phe
290 295 300

Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val Tyr Phe Cys
305 310 315 320

Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp Gly Gln Gly
325 330 335

Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
340 345 350

Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser
355 360 365

Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Ser Ala Ser
370 375 380

Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro Gly Lys Ala
385 390 395 400

Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser Gly Val Pro
405 410 415

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Phe Thr Ile
420 425 430

Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Trp
435 440 445

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

Arg
465

<210> 170
<211> 695
<212> PRT
<213> Artificial Sequence

<400> 170

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
 245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
 260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
 275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
 290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
 305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
 325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
 340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
 355 360 365

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
 385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
 405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
 420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
595 600 605

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
675 680 685

Leu Ser Leu Ser Pro Gly Lys
690 695

<210> 171
<211> 695
<212> PRT
<213> Artificial Sequence

<400> 171

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

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

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

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
355 360 365

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

Ser Ala Ser Ser Ser Val Ala Tyr Met Asn Trp Tyr Gln Gln Thr Pro
385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
 545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
 565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
 580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
 595 600 605

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
 610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
 625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
 645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
 660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
 675 680 685

Leu Ser Leu Ser Pro Gly Lys
 690 695

<210> 172
 <211> 695
 <212> PRT
 <213> Artificial Sequence

<400> 172

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
 20 25 30

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

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

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

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
355 360 365

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asn Thr Ser Lys Leu Ala Ser
405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
595 600 605

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
645 650 655

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

660

665

670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
 675 680 685

Leu Ser Leu Ser Pro Gly Lys
 690 695

<210> 173

<211> 695

<212> PRT

<213> Artificial Sequence

<400> 173

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
 20 25 30

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

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

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

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
 100 105 110

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

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
 245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
 260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
 275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
 290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
 305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asn Asp His Tyr Ser Leu Asp Tyr Trp
 325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
 340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
355 360 365

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu

565

570

575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
 580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
 595 600 605

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
 610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
 625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
 645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
 660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
 675 680 685

Leu Ser Leu Ser Pro Gly Lys
 690 695

<210> 174
 <211> 695
 <212> PRT
 <213> Artificial Sequence

<400> 174

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
 20 25 30

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

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

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

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Phe Ser Leu Asp Tyr Trp
325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
355 360 365

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro

465		470		475		480
Glu	Ala	Ala	Gly	Gly	Pro	Lys
			485			495
Leu	Phe	Pro	Pro	Lys	Pro	Lys
Asp	Thr	Leu	Met	Ile	Ser	Arg
			500			505
Thr	Cys	Val	Val	Val		
Asp	Val	Ser	His	Glu	Asp	Pro
						520
Lys	Phe	Asn	Trp	Tyr	Val	Asp
Gly	Val	Glu	Val	His	Asn	Ala
						535
Lys	Thr	Lys	Pro	Arg	Glu	Glu
						540
Gln	Tyr					
Asn	Ser	Thr	Tyr	Arg	Val	Val
						550
Ser	Val	Leu	Thr	Val	Leu	His
						555
Gln	Asp					
Trp	Leu	Asn	Gly	Lys	Glu	Tyr
						565
Lys	Cys	Lys	Val	Ser	Asn	Lys
						570
Ala	Leu					
Pro	Ala	Pro	Ile	Glu	Lys	Thr
						580
Ile	Ser	Lys	Ala	Lys	Gly	Gln
						585
Pro	Arg					
Glu	Pro	Gln	Val	Tyr	Thr	Leu
						595
Pro	Pro	Ser	Arg	Glu	Glu	Met
						600
Thr	Lys					
Asn	Gln	Val	Ser	Leu	Thr	Cys
						610
Leu	Val	Lys	Gly	Phe	Tyr	Pro
						615
Ser	Asp					
Ile	Ala	Val	Glu	Trp	Glu	Ser
						625
Asn	Gly	Gln	Pro	Glu	Asn	Asn
						630
Tyr	Lys					
Thr	Thr	Pro	Pro	Val	Leu	Asp
						645
Ser	Asp	Gly	Ser	Phe	Phe	Leu
						650
Tyr	Ser					
Lys	Leu	Thr	Val	Asp	Lys	Ser
						660
Arg	Trp	Gln	Gln	Gly	Asn	Val
						665
Phe	Ser					
Cys	Ser	Val	Met	His	Glu	Ala
						675
Leu	His	Asn	His	Tyr	Thr	Gln
						680
Lys	Ser					

Leu Ser Leu Ser Pro Gly Lys
690 695

<210> 175
<211> 695
<212> PRT
<213> Artificial Sequence

<400> 175

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

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

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

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Met Gly Ala Thr Asn Tyr Asn
275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
355 360 365

Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys

370

375

380

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
 385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
 405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
 420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
 435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
 450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
 465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
 485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
 500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
 515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
 530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
 545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
 565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
 580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
595 600 605

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
675 680 685

Leu Ser Leu Ser Pro Gly Lys
690 695

<210> 176
<211> 695
<212> PRT
<213> Artificial Sequence

<400> 176

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

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

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

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn

275

280

285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
 290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
 305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
 325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
 340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
 355 360 365

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
 385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
 405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
 420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
 435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
 450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
 465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
 485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
595 600 605

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
675 680 685

Leu Ser Leu Ser Pro Gly Lys
690 695

<210> 177
 <211> 695
 <212> PRT
 <213> Artificial Sequence

<400> 177

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
 20 25 30

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

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

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

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
 100 105 110

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

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

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

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

Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser

180

185

190

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
 245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
 260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
 275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
 290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
 305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
 325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
 340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
 355 360 365

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

Ser Ala Ser Ser Ser Val Ala Tyr Met Asn Trp Tyr Gln Gln Thr Pro
 385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
595 600 605

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
675 680 685

Leu Ser Leu Ser Pro Gly Lys
690 695

<210> 178
<211> 695
<212> PRT
<213> Artificial Sequence

<400> 178

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

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

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

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys

85

90

95

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
 100 105 110

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

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
 245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
 260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
 275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
 290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
 305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
 325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
 340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
 355 360 365

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
 385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asn Thr Ser Lys Leu Ala Ser
 405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
 420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
 435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
 450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
 465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
 485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
 500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
595 600 605

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
675 680 685

Leu Ser Leu Ser Pro Gly Lys
690 695

<210> 179
<211> 695
<212> PRT
<213> Artificial Sequence

<400> 179

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

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

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

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
 245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
 260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
 275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
 290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
 305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asn Asp His Tyr Ser Leu Asp Tyr Trp
 325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
 340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
 355 360 365

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
 385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
 405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
595 600 605

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
675 680 685

Leu Ser Leu Ser Pro Gly Lys
690 695

<210> 180
<211> 695
<212> PRT
<213> Artificial Sequence

<400> 180

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

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

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

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Phe Ser Leu Asp Tyr Trp
325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
355 360 365

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
595 600 605

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
675 680 685

Leu Ser Leu Ser Pro Gly Lys
690 695

<210> 181
<211> 695
<212> PRT
<213> Artificial Sequence

<400> 181

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

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

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

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
 245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
 260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Met Gly Ala Thr Asn Tyr Asn
 275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
 290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
 305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
 325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
 340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
 355 360 365

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
 385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
 405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
 420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
595 600 605

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser

645

650

655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
 660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
 675 680 685

Leu Ser Leu Ser Pro Gly Lys
 690 695

<210> 182

<211> 695

<212> PRT

<213> Artificial Sequence

<400> 182

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
 20 25 30

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

Gly Trp Ile Phe Pro Gly Asp Gly Asp Thr Glu Tyr Asn Gln Lys Phe
 50 55 60

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

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
 100 105 110

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

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
355 360 365

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp

545 550 555 560
 Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
 565 570 575
 Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
 580 585 590
 Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
 595 600 605
 Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
 610 615 620
 Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
 625 630 635 640
 Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
 645 650 655
 Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
 660 665 670
 Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
 675 680 685
 Leu Ser Leu Ser Pro Gly Lys
 690 695

<210> 183
 <211> 695
 <212> PRT
 <213> Artificial Sequence

<400> 183

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
 1 5 10 15
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
 20 25 30

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

Gly Trp Ile Phe Pro Gly Asp Gly Asp Thr Glu Tyr Asn Gln Lys Phe
50 55 60

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

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
355 360 365

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

Ser Ala Ser Ser Ser Val Ala Tyr Met Asn Trp Tyr Gln Gln Thr Pro
385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu

450

455

460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
 465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
 485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
 500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
 515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
 530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
 545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
 565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
 580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
 595 600 605

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
 610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
 625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
 645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
 660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
675 680 685

Leu Ser Leu Ser Pro Gly Lys
690 695

<210> 184
<211> 695
<212> PRT
<213> Artificial Sequence

<400> 184

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

Gly Trp Ile Phe Pro Gly Asp Gly Asp Thr Glu Tyr Asn Gln Lys Phe
50 55 60

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

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser

355

360

365

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
 385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asn Thr Ser Lys Leu Ala Ser
 405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
 420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
 435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
 450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
 465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
 485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
 500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
 515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
 530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
 545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
 565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
595 600 605

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
675 680 685

Leu Ser Leu Ser Pro Gly Lys
690 695

<210> 185
<211> 695
<212> PRT
<213> Artificial Sequence

<400> 185

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

Gly Trp Ile Phe Pro Gly Asp Gly Asp Thr Glu Tyr Asn Gln Lys Phe
50 55 60

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

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu

260

265

270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
 275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
 290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
 305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asn Asp His Tyr Ser Leu Asp Tyr Trp
 325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
 340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
 355 360 365

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
 385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
 405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
 420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
 435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
 450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
 465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
595 600 605

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
675 680 685

Leu Ser Leu Ser Pro Gly Lys
690 695

<210> 186
<211> 695
<212> PRT
<213> Artificial Sequence

<400> 186

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

Gly Trp Ile Phe Pro Gly Asp Gly Asp Thr Glu Tyr Asn Gln Lys Phe
50 55 60

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

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu

165

170

175

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
 245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
 260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
 275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
 290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
 305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Phe Ser Leu Asp Tyr Trp
 325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
 340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
 355 360 365

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
 385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
 405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
 420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
 435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
 450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
 465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
 485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
 500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
 515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
 530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
 545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
 565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
 580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
595 600 605

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
675 680 685

Leu Ser Leu Ser Pro Gly Lys
690 695

<210> 187
<211> 695
<212> PRT
<213> Artificial Sequence

<400> 187

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

Gly Trp Ile Phe Pro Gly Asp Gly Asp Thr Glu Tyr Asn Gln Lys Phe
50 55 60

Asn Gly Arg Ala Thr Ile Thr Ala Asp Lys Ser Thr Ser Thr Ala Tyr

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

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
355 360 365

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
595 600 605

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
675 680 685

Leu Ser Leu Ser Pro Gly Lys
690 695

<210> 188
 <211> 714
 <212> PRT
 <213> Artificial Sequence

<400> 188

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

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

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

Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Val
 50 55 60

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

Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val Tyr Phe Cys
 85 90 95

Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp Gly Gln Gly
 100 105 110

Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
 115 120 125

Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser
 130 135 140

Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Ser Ala Ser
 145 150 155 160

Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro Gly Lys Ala
 165 170 175

Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser Gly Val Pro
 180 185 190

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Phe Thr Ile
195 200 205

Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Trp
210 215 220

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

Arg Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser
245 250 255

Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Leu Ala Ser
260 265 270

Glu Asp Ile Tyr Ser Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys
275 280 285

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

Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
305 310 315 320

Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln
325 330 335

Gly Ser Lys Phe Pro Tyr Thr Phe Gly Pro Gly Thr Lys Val Asp Ile
340 345 350

Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
355 360 365

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
370 375 380

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
385 390 395 400

Phe Ile His Trp Ile Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
405 410 415

Gly Trp Ile Phe Pro Gly Asp Ala Asp Thr Glu Tyr Asn Gln Lys Phe
420 425 430

Ser Gly Arg Ala Thr Ile Thr Ala Asp Lys Ser Thr Ser Thr Ala Tyr
435 440 445

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
450 455 460

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
465 470 475 480

Thr Met Val Thr Val Ser Ser Asp Lys Thr His Thr Cys Pro Pro Cys
485 490 495

Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
500 505 510

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
515 520 525

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
530 535 540

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
545 550 555 560

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
565 570 575

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
580 585 590

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
595 600 605

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu
610 615 620

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
625 630 635 640

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
645 650 655

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
660 665 670

Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
675 680 685

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
690 695 700

Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
705 710

<210> 189
<211> 449
<212> PRT
<213> Artificial Sequence

<400> 189

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

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

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

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

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

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
225 230 235 240

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
245 250 255

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
260 265 270

Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
275 280 285

Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
290 295 300

Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
305 310 315 320

Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
325 330 335

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

Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr
355 360 365

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
370 375 380

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
385 390 395 400

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
405 410 415

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
420 425 430

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
435 440 445

Lys

<210> 190
<211> 449
<212> PRT
<213> Artificial Sequence

<400> 190

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser

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

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
 225 230 235 240

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
 245 250 255

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
 260 265 270

Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
 275 280 285

Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
 290 295 300

Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
 305 310 315 320

Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
 325 330 335

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

Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr
 355 360 365

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
 370 375 380

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
 385 390 395 400

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
 405 410 415

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
 420 425 430

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
435 440 445

Lys

<210> 191
<211> 695
<212> PRT
<213> Artificial Sequence

<400> 191

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

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

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

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp

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

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys Arg Glu Glu Met Thr Lys
595 600 605

Asn Gln Val Ser Leu Trp Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
675 680 685

Leu Ser Leu Ser Pro Gly Lys
690 695

<210> 192
<211> 705
<212> PRT
<213> Artificial Sequence

<400> 192

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

Gly Trp Ile Phe Pro Gly Asp Ala Asp Thr Glu Tyr Asn Gln Lys Phe

50

55

60

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

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
355 360 365

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
450 455 460

Gln Ile Thr Arg Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Lys
465 470 475 480

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
485 490 495

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
500 505 510

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
515 520 525

Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
530 535 540

Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
545 550 555 560

Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
565 570 575

Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
580 585 590

Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
595 600 605

Leu Pro Pro Cys Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Trp
610 615 620

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
625 630 635 640

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
645 650 655

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
660 665 670

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
675 680 685

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
690 695 700

Lys
705

<210> 193
<211> 700
<212> PRT
<213> Artificial Sequence

<400> 193

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

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

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

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
355 360 365

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
450 455 460

Gln Ile Thr Arg Glu Pro Lys Ser Val Asp Lys Thr His Thr Cys Pro
465 470 475 480

Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe
485 490 495

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
500 505 510

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
515 520 525

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
530 535 540

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
545 550 555 560

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
565 570 575

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
580 585 590

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys Arg
595 600 605

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val Lys Gly
610 615 620

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
625 630 635 640

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
645 650 655

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
660 665 670

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
675 680 685

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
690 695 700

<210> 194
<211> 474
<212> PRT
<213> Artificial Sequence

<400> 194

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

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

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

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser
355 360 365

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
450 455 460

Gln Ile Thr Arg His His His His His His
465 470

<210> 195
<211> 449
<212> PRT
<213> Artificial Sequence

<400> 195

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

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

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

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

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

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
225 230 235 240

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
245 250 255

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
260 265 270

Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
275 280 285

Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
290 295 300

Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
305 310 315 320

Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
325 330 335

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

Leu Pro Pro Cys Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Trp
355 360 365

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
370 375 380

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
385 390 395 400

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
405 410 415

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
420 425 430

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
435 440 445

Lys

<210> 196
<211> 483
<212> PRT
<213> Artificial Sequence

<400> 196

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 Leu Ala Ser Glu Asp Ile Tyr Ser Tyr
20 25 30

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

Phe Ala Ala Asn Arg Leu Gln 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

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Gly Ser Lys Phe Pro Tyr
85 90 95

Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Gly Gly Gly Gly Ser
100 105 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val Gln

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

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
 340 345 350

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

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
 370 375 380

Cys Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
 385 390 395 400

Leu Ser Cys Ala Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
 405 410 415

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
 420 425 430

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val
 435 440 445

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
 450 455 460

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
 465 470 475 480

Pro Gly Lys

<210> 197
 <211> 214
 <212> PRT
 <213> Artificial Sequence

<400> 197

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 Leu Ala Ser Glu Asp Ile Tyr Ser Tyr
20 25 30

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

Phe Ala Ala Asn Arg Leu Gln Asp 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

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Gly Ser Lys Phe Pro Tyr
85 90 95

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

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

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

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

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

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

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

Phe Asn Arg Gly Glu Cys
210

<210> 198

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

<400> 198

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 Leu Ala Ser Glu Asp Ile Tyr Ser Tyr
20 25 30

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

Phe Ala Ala Asn Arg Leu Gln 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

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Gly Ser Lys Phe Pro Tyr
85 90 95

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

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

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

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

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

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

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

Phe Asn Arg Gly Glu Cys
210

<210> 199
<211> 465
<212> PRT
<213> Artificial Sequence

<400> 199

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 Leu Ala Ser Glu Asp Ile Tyr Ser Tyr
20 25 30

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

Phe Ala Ala Asn Arg Leu Gln 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

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Gly Ser Lys Phe Pro Tyr
85 90 95

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

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

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

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln

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

Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Ser Ala Ser
370 375 380

Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro Gly Lys Ala
385 390 395 400

Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser Gly Val Pro
405 410 415

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Phe Thr Ile
420 425 430

Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Trp
435 440 445

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

Arg
465

<210> 200
<211> 227
<212> PRT
<213> Artificial Sequence

<400> 200

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

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

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

Cys Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
130 135 140

Leu Ser Cys Ala 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 Val Ser Lys Leu Thr Val
180 185 190

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

Pro Gly Lys
225

<210> 201
<211> 483
<212> PRT
<213> Artificial Sequence

<400> 201

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

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

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

Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Val
50 55 60

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

Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val Tyr Phe Cys
85 90 95

Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
115 120 125

Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser
130 135 140

Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Ser Ala Ser
145 150 155 160

Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro Gly Lys Ala
165 170 175

Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser Gly Val Pro
180 185 190

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Phe Thr Ile
195 200 205

Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Trp
210 215 220

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

Arg Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 245 250 255

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly
 260 265 270

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
 275 280 285

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
 290 295 300

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
 305 310 315 320

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
 325 330 335

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
 340 345 350

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

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
 370 375 380

Tyr Thr Leu Pro Pro Cys Arg Glu Glu Met Thr Lys Asn Gln Val Ser
 385 390 395 400

Leu Trp Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
 405 410 415

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
 420 425 430

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
435 440 445

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
450 455 460

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
465 470 475 480

Pro Gly Lys

<210> 202
<211> 465
<212> PRT
<213> Artificial Sequence

<400> 202

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 Leu Ala Ser Glu Asp Ile Tyr Ser Tyr
20 25 30

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

Phe Ala Ala Asn Arg Leu Gln Asp 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

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Gly Ser Lys Phe Pro Tyr
85 90 95

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

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

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

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

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

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

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

Phe Asn Arg Gly Glu Cys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
210 215 220

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

Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Tyr
245 250 255

Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile
260 265 270

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

Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Ala Phe
290 295 300

Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val Tyr Phe Cys
305 310 315 320

Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp Gly Gln Gly
325 330 335

Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
340 345 350

Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser
355 360 365

Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Ser Ala Ser
370 375 380

Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro Gly Lys Ala
385 390 395 400

Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser Gly Val Pro
405 410 415

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Phe Thr Ile
420 425 430

Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Trp
435 440 445

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

Arg
465

<210> 203
<211> 468
<212> PRT
<213> Artificial Sequence

<400> 203

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 Leu Ala Ser Glu Asp Ile Tyr Ser Tyr
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile

35

40

45

Phe Ala Ala Asn Arg Leu Gln Asp 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

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Gly Ser Lys Phe Pro Tyr
 85 90 95

Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Gly Gly Gly Gly Ser
 100 105 110

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val Gln
 115 120 125

Ser Gly Ala Glu Val Lys Lys Pro Gly Ser Ser Val Lys Val Ser Cys
 130 135 140

Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn Phe Ile His Trp Ile Arg
 145 150 155 160

Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile Gly Trp Ile Phe Pro Gly
 165 170 175

Asp Ala Asp Thr Glu Tyr Asn Gln Lys Phe Ser Gly Arg Ala Thr Ile
 180 185 190

Thr Ala Asp Lys Ser Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu
 195 200 205

Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Gly Asn Tyr Asn
 210 215 220

Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Met Val Thr Val Ser
 225 230 235 240

Ser Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala
 245 250 255

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
260 265 270

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
275 280 285

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
290 295 300

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
305 310 315 320

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
325 330 335

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
340 345 350

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

Val Cys Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val
370 375 380

Ser Leu Ser Cys Ala Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
385 390 395 400

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
405 410 415

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Val Ser Lys Leu Thr
420 425 430

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
435 440 445

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
450 455 460

Ser Pro Gly Lys
465

<210> 204
<211> 119
<212> PRT
<213> Artificial Sequence

<400> 204

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

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

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

Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Val
50 55 60

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

Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val Tyr Phe Cys
85 90 95

Ala Arg Tyr Tyr Asn Asp His Tyr Ser Leu Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Pro Val Thr Val Ser Ser
115

<210> 205
<211> 119
<212> PRT
<213> Artificial Sequence

<400> 205

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

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

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

Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Val
50 55 60

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

Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val Tyr Phe Cys
85 90 95

Ala Arg Tyr Tyr Asp Asp His Phe Ser Leu Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Pro Val Thr Val Ser Ser
115

<210> 206
<211> 119
<212> PRT
<213> Artificial Sequence

<400> 206

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

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

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

Gly Tyr Ile Asn Pro Ser Met Gly Ala Thr Asn Tyr Asn Gln Lys Val
50 55 60

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

Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val Tyr Phe Cys
85 90 95

Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Pro Val Thr Val Ser Ser
115

<210> 207
<211> 107
<212> PRT
<213> Artificial Sequence

<400> 207

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 Ser Ala Ser Ser Ser Val Ala Tyr Met
20 25 30

Asn Trp Tyr Gln Gln Thr Pro Gly Lys Ala Pro Lys Arg Trp Ile Tyr
35 40 45

Asp Thr Ser Lys Leu Ala Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
50 55 60

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

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

Phe Gly Gln Gly Thr Lys Leu Gln Ile Thr Arg
100 105

<210> 208
<211> 107

<212> PRT
<213> Artificial Sequence

<400> 208

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 Ser Ala Ser Ser Ser Val Ser Tyr Met
20 25 30

Asn Trp Tyr Gln Gln Thr Pro Gly Lys Ala Pro Lys Arg Trp Ile Tyr
35 40 45

Asn Thr Ser Lys Leu Ala Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
50 55 60

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

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

Phe Gly Gln Gly Thr Lys Leu Gln Ile Thr Arg
100 105

<210> 209
<211> 217
<212> PRT
<213> Artificial Sequence

<400> 209

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
20 25 30

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
35 40 45

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu

50

55

60

Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
65 70 75 80

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

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
100 105 110

Pro Arg Glu Pro Gln Val Cys Thr Leu Pro Pro Ser Arg Glu Glu Met
115 120 125

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

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

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
165 170 175

Val Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
180 185 190

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
195 200 205

Lys Ser Leu Ser Leu Ser Pro Gly Lys
210 215

<210> 210

<211> 217

<212> PRT

<213> Artificial Sequence

<400> 210

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
20 25 30

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
35 40 45

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
50 55 60

Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
65 70 75 80

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

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
100 105 110

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys Arg Glu Glu Met
115 120 125

Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val Lys Gly Phe Tyr Pro
130 135 140

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

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
165 170 175

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
180 185 190

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
195 200 205

Lys Ser Leu Ser Leu Ser Pro Gly Lys
210 215

<210> 211
 <211> 217
 <212> PRT
 <213> Artificial Sequence

<400> 211

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 20 25 30

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 35 40 45

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 50 55 60

Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
 65 70 75 80

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

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 100 105 110

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 115 120 125

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 130 135 140

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

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
 165 170 175

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
 180 185 190

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
195 200 205

Lys Ser Leu Ser Leu Ser Pro Gly Lys
210 215

<210> 212
<211> 695
<212> PRT
<213> Artificial Sequence

<400> 212

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn
20 25 30

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

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

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

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

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

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

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

Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
 245 250 255

Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
 260 265 270

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
 275 280 285

Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
 290 295 300

Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val
 305 310 315 320

Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
 325 330 335

Gly Gln Gly Thr Pro Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly
 340 345 350

Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser

355

360

365

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

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
 385 390 395 400

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser
 405 410 415

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
 420 425 430

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
 435 440 445

Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu
 450 455 460

Gln Ile Thr Arg Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
 465 470 475 480

Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
 485 490 495

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
 500 505 510

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
 515 520 525

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
 530 535 540

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
 545 550 555 560

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
 565 570 575

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
580 585 590

Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys Arg Glu Glu Met Thr Lys
595 600 605

Asn Gln Val Ser Leu Trp Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
610 615 620

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
625 630 635 640

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
645 650 655

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
660 665 670

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
675 680 685

Leu Ser Leu Ser Pro Gly Lys
690 695