

SEQUENCE LISTING

<110> Merck Patent GmbH
Ablynx N.V.

<120> ADAMTS Binding Immunoglobulins

<130> MEPAT.0103

<150> EP17174403.0

<151> 2017-06-02

<160> 174

<170> BiSSAP 1.3.6

<210> 1

<211> 124

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 1

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

<210> 2

<211> 124

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 2

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

<210> 3

<211> 124

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 3

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

<210> 4

<211> 125

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 4

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

<210> 5

<211> 126

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 5

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

<210> 6
 <211> 126
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 6
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Ala Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ser Phe Ser Gly Pro Gly Arg Thr Phe Ala
 20 25 30
 Arg Tyr Ala Met Gly Trp Phe Arg Gln Ala Pro Gly Lys Asn Arg Asp
 35 40 45
 Phe Ile Thr Gly Ile Ser Gly Ser Gly Asp Ser Thr Tyr Tyr Val Tyr
 50 55 60
 Pro Met Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Met
 65 70 75 80
 Val Tyr Leu Gln Met Asn Ala Leu Lys Pro Glu Asp Thr Ala Val Tyr
 85 90 95
 Tyr Cys Ala Ala Asp Arg Glu Ile Asn Arg Ile Ala Asn Asp Lys Glu
 100 105 110
 Leu Asp Phe Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
 115 120 125

<210> 7
 <211> 123
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 7
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Ala Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Arg Thr Thr Phe Ser Ser
 20 25 30
 Tyr Ala Met Gly Trp Phe Arg Gln Ala Pro Gly Lys Glu Arg Ala Phe
 35 40 45
 Val Ala Thr Ile Trp Ser Gly Gly Leu Thr Val Tyr Ala Asp Ser Ala
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Val Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala	Ala	Glu	Ala	Val	Gly	Thr	Tyr	Tyr	Thr	Pro	Asp	Gly	Trp	Thr	Tyr
			100					105					110		
Trp	Gly	Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser					
		115					120								

<210> 8
 <211> 124
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 8															
Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu	Val	Gln	Ala	Gly	Gly
1			5					10					15		
Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Leu	Thr	Phe	Arg	Arg	Asn
		20					25					30			
Ala	Met	Gly	Trp	Phe	Arg	Gln	Ala	Pro	Gly	Lys	Glu	Arg	Glu	Leu	Leu
	35					40					45				
Ala	Gly	Ile	Asn	Trp	Ser	Gly	Gly	Thr	Thr	Tyr	Tyr	Val	Asp	Ser	Val
	50				55					60					
Lys	Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ala	Lys	Asn	Thr	Val	Asp
65			70					75					80		
Leu	Gln	Met	Ile	Ser	Pro	Lys	Pro	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
		85					90					95			
Ala	Ala	Asp	Gly	Asp	Ile	Gly	Thr	Leu	Val	Asn	Asp	Glu	Asn	Pro	Arg
		100				105						110			
Tyr	Trp	Gly	Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser				
		115				120									

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

<220>
 <223> Amino acid sequence

<400> 9															
Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu	Val	Gln	Ala	Gly	Gly
1			5					10					15		
Ser	Leu	Arg	Leu	Ser	Cys	Ala	Thr	Ser	Gly	Phe	Thr	Phe	Ser	Pro	Tyr
		20					25					30			
Tyr	Met	Gly	Trp	Phe	Arg	Gln	Ala	Pro	Gly	Lys	Glu	Arg	Asp	Phe	Val
	35					40					45				
Ala	Ala	Ile	Thr	Arg	Ser	Arg	Gly	Thr	Thr	Tyr	Tyr	Leu	Asp	Ser	Thr
	50					55				60					

Glu	Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ala	Lys	Asn	Thr	Met	Tyr
65					70					75				80	
Leu	Gln	Met	Asn	Ser	Leu	Asn	Pro	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
			85					90						95	
Ala	Ala	Gly	Arg	Ser	Pro	Gly	Asp	Pro	Ser	Arg	Thr	Tyr	Leu	Tyr	Glu
		100					105						110		
Tyr	Trp	Gly	Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser				
		115					120								

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

<220>
 <223> Amino acid sequence

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

<210> 11
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 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

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

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

<210> 12
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 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

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

<210> 13
 <211> 121
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 13

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

<210> 14
 <211> 119
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

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

<210> 15
 <211> 124
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 15

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

<210> 16

<211> 125

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 16

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

<210> 17

<211> 125

<212> PRT
<213> Artificial Sequence

<220>
<223> Amino acid sequence

<400> 17
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Phe Val Gln Ala Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Arg Arg Thr Ile Ser Ser Gly
20 25 30
Thr Met Gly Trp Phe Arg Gln Ala Pro Gly Lys Glu Arg Glu Phe Val
35 40 45
Ala Ala Ile Arg Trp Ser Ser Gly Ile Thr Phe Tyr Pro Asp Ser Val
50 55 60
Glu Gly Arg Phe Thr Ile Ser Gly Asp Asn Ala Lys Asn Thr Val Ser
65 70 75 80
Leu Gln Met Asn Ser Leu Lys Pro Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Ala Asp Arg Ser Ala Leu Arg Asp Pro Ser Phe Glu Val Asn Tyr
100 105 110
Glu Tyr Trp Gly Arg Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 18
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Amino acid sequence

<400> 18
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Ala Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Val Ala Ser Gly Ser Ile Phe Ser Ile Asp
20 25 30
Ala Met Gly Trp Tyr Arg Gln Ala Pro Gly Lys Glu Arg Glu Leu Val
35 40 45
Ala Ser Val Thr Thr Gly Ala Ser Pro Asn Tyr Gly Asp Ser Val Thr
50 55 60
Gly Arg Phe Thr Ala Ser Arg Asp Arg Ala Lys Asn Ala Leu Tyr Leu
65 70 75 80
Gln Met Asn Ser Leu Lys Pro Glu Asp Thr Ala Val Tyr Tyr Cys Asn
85 90 95
Leu Ile Met Thr Ile Pro Gly Gly Ser Gln Ile Met Tyr Trp Gly Gln
100 105 110
Gly Thr Leu Val Thr Val Ser Ser

115

120

<210> 19
 <211> 120
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 19
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Ser Val Gln Ala Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Val Ala Ser Gly Arg Tyr Pro Met Ala Trp
 20 25 30
 Phe Arg Gln Ala Pro Gly Lys Glu Arg Glu Phe Val Ala Gly Val Ser
 35 40 45
 Trp Gly Gly Asp Arg Thr Tyr Tyr Ala Asp Ser Val Gln Gly Arg Phe
 50 55 60
 Thr Val Ser Arg Asp Tyr Ala Lys Asn Thr Leu Tyr Leu Gln Met Asn
 65 70 75 80
 Ser Leu Lys Pro Glu Asp Ala Ala Val Tyr Tyr Cys Ala Gly Asp Pro
 85 90 95
 Trp Gly Arg Leu Phe Arg Val Lys Asp Asn Tyr Ser Asp Trp Gly Gln
 100 105 110
 Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 20
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 20
 Gly Arg Thr Phe Ser Ser Tyr Ala Met Gly
 1 5 10

<210> 21
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 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 21
Gly Arg Thr Val Ser Ser Tyr Ala Met Gly
1 5 10

<210> 22
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Amino acid sequence

<400> 22
Gly Ser Ala Val Ser Val Asn Ala Met Ala
1 5 10

<210> 23
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Amino acid sequence

<400> 23
Gly Arg Thr Phe Ser Thr Tyr Phe Val Gly
1 5 10

<210> 24
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Amino acid sequence

<400> 24
Arg Arg Thr Phe Ser Ser Tyr Val Met Ala
1 5 10

<210> 25
<211> 12
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<213> Artificial Sequence

<220>
<223> Amino acid sequence

<400> 25
Gly Pro Gly Arg Thr Phe Ala Arg Tyr Ala Met Gly
1 5 10

<210> 26
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Amino acid sequence

<400> 26
Gly Arg Thr Thr Phe Ser Ser Tyr Ala Met Gly
1 5 10

<210> 27
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Amino acid sequence

<400> 27
Gly Leu Thr Phe Arg Arg Asn Ala Met Gly
1 5 10

<210> 28
<211> 10
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<213> Artificial Sequence

<220>
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<400> 28
Gly Phe Thr Phe Ser Pro Tyr Tyr Met Gly
1 5 10

<210> 29
<211> 10
<212> PRT
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<220>

<223> Amino acid sequence

<400> 29

Gly Arg Ala Leu Ser Ser Ser Ile Met Gly
1 5 10

<210> 30

<211> 10

<212> PRT

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<220>

<223> Amino acid sequence

<400> 30

Gly Ser Asp Val Val Val Asn Asp Met Gly
1 5 10

<210> 31

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 31

Gly Ser Ile Phe Ser Ile Asn Val Met Gly
1 5 10

<210> 32

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 32

Gly Leu Thr Phe Ser Ser Tyr Thr Met Gly
1 5 10

<210> 33

<211> 10

<212> PRT
<213> Artificial Sequence

<220>
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<400> 33
Arg Arg Thr Ile Ser Ser Gly Thr Met Gly
1 5 10

<210> 34
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
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<400> 34
Gly Ser Ile Phe Ser Ile Asp Ala Met Gly
1 5 10

<210> 35
<211> 6
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<213> Artificial Sequence

<220>
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<400> 35
Gly Arg Tyr Pro Met Ala
1 5

<210> 36
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
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<400> 36
Gly Ile Ser Arg Ser Ala Gly Arg Thr Tyr
1 5 10

<210> 37
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
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<400> 37
Gly Ile Ser Arg Ser Ala Glu Arg Thr Tyr
1 5 10

<210> 38
<211> 11
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<213> Artificial Sequence

<220>
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<400> 38
Ala Ile Ser Arg Asn Gly Ala Arg Thr Tyr Tyr
1 5 10

<210> 39
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
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<400> 39
Ala Ile Ser Arg Ser Gly Asp Ser Thr Tyr
1 5 10

<210> 40
<211> 10
<212> PRT
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<220>
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<400> 40
Gly Ile Ser Gly Ser Gly Asp Ser Thr Tyr

1 5 10

<210> 41
<211> 9
<212> PRT
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<220>
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<400> 41
Thr Ile Trp Ser Gly Gly Leu Thr Val
1 5

<210> 42
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
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<400> 42
Gly Ile Asn Trp Ser Gly Gly Thr Thr Tyr
1 5 10

<210> 43
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
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<400> 43
Ala Ile Thr Arg Ser Arg Gly Thr Thr Tyr
1 5 10

<210> 44
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
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<400> 44
Ala Ile Ser Arg Ser Arg Gly Thr Thr Tyr
1 5 10

<210> 45
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
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<400> 45
Ala Ile Ser Trp Ser Arg Gly Ile Leu Tyr
1 5 10

<210> 46
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
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<400> 46
Ala Ile Thr Trp Ser Gly Gly Arg Ala Tyr Tyr Ala Asp
1 5 10

<210> 47
<211> 9
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<220>
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<400> 47
Asp Ile Thr Thr Gly Gly Arg Thr Asn
1 5

<210> 48
<211> 9
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<400> 48

Ala Ile Ile Ser Gly Gly Arg Thr Asn
1 5

<210> 49

<211> 10

<212> PRT

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<220>

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<400> 49

Ala Ile Ser Trp Asn Thr Phe Thr Thr Tyr
1 5 10

<210> 50

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

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<400> 50

Ala Ile Arg Trp Ser Ser Gly Met Pro Tyr
1 5 10

<210> 51

<211> 10

<212> PRT

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<220>

<223> Amino acid sequence

<400> 51

Ala Ile Arg Trp Ser Ser Gly Ile Thr Phe
1 5 10

<210> 52

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 52

Ser Val Thr Thr Gly Ala Ser Pro Asn

1 5

<210> 53

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 53

Gly Val Ser Trp Gly Gly Asp Arg Thr Tyr

1 5 10

<210> 54

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

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<400> 54

Asp Leu Asp Pro Asn Arg Ile Phe Ser Arg Asp Glu Ala Ala Tyr

1 5 10 15

<210> 55

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 55

Asp Leu Asp Pro Asn Arg Ile Phe Ser Arg Glu Glu Tyr Ala Tyr

1 5 10 15

<210> 56

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 56

Ala	Arg	Ile	Ser	Pro	Ser	Asp	Pro	Ser	Asn	Glu	Asp	Gly	Tyr	Asp	Tyr
1			5						10					15	

<210> 57

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 57

Ser	Arg	Ala	Pro	Ser	Phe	Arg	Thr	Ile	Asp	Ala	Ile	Asn	Tyr	Tyr	Asp
1			5						10					15	

Tyr

<210> 58

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 58

Asp	Arg	Glu	Ile	Asn	Arg	Ile	Ala	Asn	Asp	Lys	Glu	Leu	Asp	Phe
1			5						10					15

<210> 59

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 59

Glu Ala Val Gly Thr Tyr Tyr Thr Pro Asp Gly Trp Thr Tyr
1 5 10

<210> 60

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 60

Asp Gly Asp Ile Gly Thr Leu Val Asn Asp Glu Asn Pro Arg Tyr
1 5 10 15

<210> 61

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 61

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

<210> 62

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 62

Gly Arg Ser Pro Gly Asp Pro Ser Arg Thr Tyr Leu Tyr Asp Tyr
1 5 10 15

<210> 63

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 63
Ser Arg Ser Pro Gly Asp Pro Ser Arg Thr Tyr Leu Tyr Asp Tyr
1 5 10 15

<210> 64
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
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<400> 64
Ala Leu Ala Ile Pro Val Thr Met Ser Pro His Glu Tyr Pro Tyr
1 5 10 15

<210> 65
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
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<400> 65
Gln Val Gly Asp Ser Asp Asp Asp Val Trp Tyr Ala Tyr
1 5 10

<210> 66
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
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<400> 66
Glu Val Asp Ala Gly Ile Tyr Ala Tyr Gly Tyr
1 5 10

<210> 67
<211> 15
<212> PRT
<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 67

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

<210> 68

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 68

Asp	Arg	Ser	Ala	Phe	Arg	Asp	Pro	Ser	Phe	Asp	Val	Asn	Tyr	Glu	Tyr
1			5					10					15		

<210> 69

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 69

Asp	Arg	Ser	Ala	Leu	Arg	Asp	Pro	Ser	Phe	Glu	Val	Asn	Tyr	Glu	Tyr
1			5					10					15		

<210> 70

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 70

Ile	Met	Thr	Ile	Pro	Gly	Gly	Ser	Gln	Ile	Met	Tyr
1			5					10			

<210> 71
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Amino acid sequence

<400> 71
Asp Pro Trp Gly Arg Leu Phe Arg Val Lys Asp Asn Tyr Ser Asp
1 5 10 15

<210> 72
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> Amino acid sequence

<400> 72
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Ala Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser
20 25

<210> 73
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> Amino acid sequence

<400> 73
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Ser Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser
20 25

<210> 74
<211> 25
<212> PRT
<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 74

Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu	Val	Gln	Ala	Gly	Asp
1				5					10					15	
Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser							
			20					25							

<210> 75

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 75

Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu	Val	Gln	Pro	Gly	Gly
1				5					10					15	
Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser							
			20					25							

<210> 76

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 76

Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu	Val	Gln	Ala	Gly	Gly
1				5					10					15	
Ser	Leu	Arg	Leu	Ser	Cys	Ser	Phe	Ser							
			20					25							

<210> 77

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 77

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

Ser Leu Arg Leu Ser Cys Ala Thr Ser
20 25

<210> 78

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 78

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Ala Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Pro Ser
20 25

<210> 79

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 79

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Ala Gly Ala
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Thr Ser
20 25

<210> 80

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 80

Glu Val Gln Leu Val Glu Ser Gly Gly Asp Leu Val Gln Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser
20 25

<210> 81

<211> 25

<212> PRT
<213> Artificial Sequence

<220>
<223> Amino acid sequence

<400> 81
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Phe Val Gln Ala Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Val Ala Ser
 20 25

<210> 82
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
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<400> 82
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Phe Val Gln Ala Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser
 20 25

<210> 83
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> Amino acid sequence

<400> 83
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Ala Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Val Ala Ser
 20 25

<210> 84
<211> 25
<212> PRT
<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 84

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Ser Val Gln Ala Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Val Ala Ser
20 25

<210> 85

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 85

Trp Phe Arg Gln Ala Pro Gly Lys Glu Arg Asp Phe Val Ala
1 5 10

<210> 86

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 86

Trp Phe Arg Leu Ala Pro Gly Lys Glu Arg Glu Phe Val Ala
1 5 10

<210> 87

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 87

Trp Tyr Arg Gln Ala Pro Gly Lys Gln Arg Asp Phe Val Ala
1 5 10

<210> 88

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 88

Trp	Phe	Arg	Gln	Ala	Pro	Gly	Lys	Glu	Arg	Glu	Phe	Val	Ala
1				5						10			

<210> 89

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 89

Trp	Phe	Arg	Gln	Ala	Pro	Gly	Lys	Asn	Arg	Asp	Phe	Ile	Thr
1				5						10			

<210> 90

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 90

Trp	Phe	Arg	Gln	Ala	Pro	Gly	Lys	Glu	Arg	Ala	Phe	Val	Ala
1				5						10			

<210> 91

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 91

Trp	Phe	Arg	Gln	Ala	Pro	Gly	Lys	Glu	Arg	Glu	Leu	Leu	Ala
1				5						10			

<210> 92

<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Amino acid sequence

<400> 92
Trp Tyr Arg Gln Ala Pro Gly Lys Gln Arg Glu Leu Val Ala
1 5 10

<210> 93
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Amino acid sequence

<400> 93
Trp Phe Arg Gln Ala Pro Gly Gln Glu Arg Glu Phe Val Ser
1 5 10

<210> 94
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Amino acid sequence

<400> 94
Trp Tyr Arg Gln Ala Pro Gly Lys Glu Arg Glu Leu Val Ala
1 5 10

<210> 95
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Amino acid sequence

<400> 95
Tyr Val Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Ser Ala
1 5 10 15

Lys Asn Thr Val Tyr Leu Gln Met Asn Arg Leu Lys Pro Glu Asp Thr
 20 25 30
 Ala Val Tyr Tyr Cys Ala Ala
 35

<210> 96
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 96
 Tyr Val Asp Ser Leu Lys Gly Arg Phe Thr Ile Ser Arg Asp Ser Ala
 1 5 10 15
 Lys Asn Thr Val Tyr Leu His Met Asn Arg Leu Lys Pro Glu Asp Thr
 20 25 30
 Ala Val Tyr Tyr Cys Ala Ala
 35

<210> 97
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 97
 Tyr Thr Asp Ser Val Lys Asp Arg Phe Thr Ile Ala Arg Asp Ser Ala
 1 5 10 15
 Lys Asn Thr Val Tyr Leu Gln Met Asn Arg Leu Lys Pro Glu Asp Thr
 20 25 30
 Ala Val Tyr Tyr Cys Ala Ala
 35

<210> 98
 <211> 38
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 98
 Tyr Asp Ser Val Ala Gly Leu Phe Thr Ile Ser Arg Asp Asn Ala Lys

1		5		10		15									
Asn	Thr	Val	Tyr	Leu	Gln	Met	Ser	Ser	Leu	Lys	Pro	Glu	Asp	Thr	Ala
		20						25					30		
Val	Tyr	Tyr	Cys	Ala	Ala										
		35													

<210> 99
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
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<400> 99															
Tyr	Tyr	Asp	Ser	Leu	Glu	Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ala
1			5					10					15		
Lys	Asn	Thr	Val	His	Leu	Gln	Met	Asn	Ser	Leu	Lys	Pro	Glu	Asp	Thr
		20						25					30		
Ala	Val	Tyr	Ile	Cys	Ala	Ala									
		35													

<210> 100
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
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<400> 100															
Tyr	Val	Tyr	Pro	Met	Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ala
1			5					10					15		
Lys	Asn	Met	Val	Tyr	Leu	Gln	Met	Asn	Ala	Leu	Lys	Pro	Glu	Asp	Thr
		20						25					30		
Ala	Val	Tyr	Tyr	Cys	Ala	Ala									
		35													

<210> 101
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 101

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

<210> 102
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 102
 Tyr Val Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala
 1 5 10 15
 Lys Asn Thr Val Asp Leu Gln Met Ile Ser Pro Lys Pro Glu Asp Thr
 20 25 30
 Ala Val Tyr Tyr Cys Ala Ala
 35

<210> 103
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 103
 Tyr Leu Asp Ser Thr Glu Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala
 1 5 10 15
 Lys Asn Thr Met Tyr Leu Gln Met Asn Ser Leu Asn Pro Glu Asp Thr
 20 25 30
 Ala Val Tyr Tyr Cys Ala Ala
 35

<210> 104
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 104

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

<210> 105

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 105

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

<210> 106

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 106

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

<210> 107

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 107

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

<210> 108

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 108

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

<210> 109

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 109

Tyr Val Asp Ser Val Lys Asp Arg Phe Thr Val Ser Arg Asp Asn Ala
1 5 10 15
Lys Asn Thr Leu Tyr Leu Arg Met Asn Ser Leu Lys Pro Glu Asp Thr
20 25 30
Ala Val Tyr Tyr Cys Ala Ala
35

<210> 110

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 110

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

<210> 111

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 111

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

<210> 112

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 112

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

<210> 113

<211> 39

<212> PRT

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<220>

<223> Amino acid sequence

<400> 113

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

<210> 114

<211> 11

<212> PRT

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<400> 114

Trp	Gly	Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser
1				5					10	

<210> 115

<211> 11

<212> PRT

<213> Artificial Sequence

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<400> 115

Trp	Gly	Arg	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser
1				5					10	

<210> 116

<211> 120

<212> PRT

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<220>

<223> Amino acid sequence

<400> 116

Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Ser	Val	Gln	Ala	Gly	Gly
1				5					10					15	
Ser	Leu	Arg	Leu	Ser	Cys	Val	Ala	Ser	Gly	Arg	Tyr	Pro	Met	Ala	Trp

<400> 118

Asp Pro Trp Gly Arg Leu Phe Arg Val Lys Asp Gln Tyr Ser Asp
1 5 10 15

<210> 119

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 119

Gly Ile Ser Trp Ser Gly Gly Thr Thr Tyr
1 5 10

<210> 120

<211> 274

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 120

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

			180					185				190					
Met	Ser	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val	Ser		
		195					200					205					
Ser	Ile	Ser	Gly	Ser	Gly	Ser	Asp	Thr	Leu	Tyr	Ala	Asp	Ser	Val	Lys		
	210					215					220						
Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ala	Lys	Thr	Thr	Leu	Tyr	Leu		
225					230					235					240		
Gln	Met	Asn	Ser	Leu	Arg	Pro	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Thr		
				245				250						255			
Ile	Gly	Gly	Ser	Leu	Ser	Arg	Ser	Ser	Gln	Gly	Thr	Leu	Val	Thr	Val		
			260					265					270				
Ser	Ser																

<210> 121
 <211> 276
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 121

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

Val	Ser	Ser	Ile	Ser	Gly	Ser	Gly	Ser	Asp	Thr	Leu	Tyr	Ala	Asp	Ser
	210					215					220				
Val	Lys	Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ala	Lys	Thr	Thr	Leu
225					230				235						240
Tyr	Leu	Gln	Met	Asn	Ser	Leu	Arg	Pro	Glu	Asp	Thr	Ala	Val	Tyr	Tyr
			245						250					255	
Cys	Thr	Ile	Gly	Gly	Ser	Leu	Ser	Arg	Ser	Ser	Gln	Gly	Thr	Leu	Val
			260					265					270		
Thr	Val	Ser	Ser												
	275														

<210> 122
 <211> 274
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 122

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

225		230		235		240
Gln Met Asn Ser	Leu Arg Pro Glu Asp Thr	Ala Val Tyr Tyr Cys Thr				
	245	250		255		
Ile Gly Gly Ser	Leu Ser Arg Ser Ser	Gln Gly Thr Leu Val Thr Val				
	260	265		270		
Ser Ser						

<210> 123
 <211> 274
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 123

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

Ile Gly Gly Ser Leu Ser Arg Ser Ser Gln Gly Thr Leu Val Thr Val
 260 265 270
 Ser Ser

<210> 124
 <211> 274
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 124
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Ser Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Ser Ala Val Ser Val Asn
 20 25 30
 Ala Met Ala Trp Tyr Arg Gln Ala Pro Gly Lys Gln Arg Asp Phe Val
 35 40 45
 Ala Gly Ile Ser Arg Ser Ala Gly Arg Thr Tyr Tyr Thr Asp Ser Val
 50 55 60
 Lys Asp Arg Phe Thr Ile Ala Arg Asp Ser Ala Lys Asn Thr Val Tyr
 65 70 75 80
 Leu Gln Met Asn Arg Leu Lys Pro Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Ala Asp Leu Asp Pro Asn Arg Ile Phe Ser Arg Asp Glu Ala Ala
 100 105 110
 Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly
 115 120 125
 Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 130 135 140
 Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
 145 150 155 160
 Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Asn Ser
 165 170 175
 Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe Gly
 180 185 190
 Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser
 195 200 205
 Ser Ile Ser Gly Ser Gly Ser Asp Thr Leu Tyr Ala Asp Ser Val Lys
 210 215 220
 Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Thr Thr Leu Tyr Leu
 225 230 235 240
 Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Val Tyr Tyr Cys Thr
 245 250 255
 Ile Gly Gly Ser Leu Ser Arg Ser Ser Gln Gly Thr Leu Val Thr Val
 260 265 270
 Ser Ser

<210> 125
 <211> 275
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 125
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Phe Val Gln Ala Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Val Ala Ser Arg Arg Thr Ile Ser Ser Gly
 20 25 30
 Thr Met Gly Trp Phe Arg Gln Ala Pro Gly Lys Glu Arg Glu Phe Val
 35 40 45
 Ala Ala Ile Arg Trp Ser Ser Gly Met Pro Tyr Tyr Leu Asp Ser Val
 50 55 60
 Met Asp Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Val Ser
 65 70 75 80
 Leu Gln Met Asn Ser Leu Gln Pro Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Ala Asp Arg Ser Ala Phe Arg Asp Pro Ser Phe Asp Val Asn Tyr
 100 105 110
 Glu Tyr Trp Gly Arg Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
 115 120 125
 Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
 130 135 140
 Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 145 150 155 160
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Asn
 165 170 175
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 180 185 190
 Gly Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 195 200 205
 Ser Ser Ile Ser Gly Ser Gly Ser Asp Thr Leu Tyr Ala Asp Ser Val
 210 215 220
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Thr Thr Leu Tyr
 225 230 235 240
 Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Val Tyr Tyr Cys
 245 250 255
 Thr Ile Gly Gly Ser Leu Ser Arg Ser Ser Gln Gly Thr Leu Val Thr
 260 265 270
 Val Ser Ser
 275

<210> 126

<211> 429
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 126
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Ala Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Arg Thr Val Ser Ser Tyr
 20 25 30
 Ala Met Gly Trp Phe Arg Leu Ala Pro Gly Lys Glu Arg Glu Phe Val
 35 40 45
 Ala Gly Ile Ser Arg Ser Ala Glu Arg Thr Tyr Tyr Val Asp Ser Leu
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Ser Ala Lys Asn Thr Val Tyr
 65 70 75 80
 Leu His Met Asn Arg Leu Lys Pro Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Ala Asp Leu Asp Pro Asn Arg Ile Phe Ser Arg Glu Glu Tyr Ala
 100 105 110
 Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly
 115 120 125
 Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 130 135 140
 Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
 145 150 155 160
 Val Gln Leu Val Glu Ser Gly Gly Gly Ser Val Gln Ala Gly Gly Ser
 165 170 175
 Leu Arg Leu Ser Cys Val Ala Ser Gly Arg Tyr Pro Met Ala Trp Phe
 180 185 190
 Arg Gln Ala Pro Gly Lys Glu Arg Glu Phe Val Ala Gly Val Ser Trp
 195 200 205
 Gly Gly Asp Arg Thr Tyr Tyr Ala Asp Ser Val Gln Gly Arg Phe Thr
 210 215 220
 Val Ser Arg Asp Tyr Ala Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser
 225 230 235 240
 Leu Lys Pro Glu Asp Ala Ala Val Tyr Tyr Cys Ala Gly Asp Pro Trp
 245 250 255
 Gly Arg Leu Phe Arg Val Lys Asp Gln Tyr Ser Asp Trp Gly Gln Gly
 260 265 270
 Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
 275 280 285
 Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 290 295 300
 Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu
 305 310 315 320
 Ser Gly Gly Gly Leu Val Gln Pro Gly Asn Ser Leu Arg Leu Ser Cys

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

<210> 127
 <211> 429
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 127

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

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

<210> 128
 <211> 429
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 128

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

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

<210> 129

<211> 275

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 129

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

<211> 430

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 130

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

385		390		395		400									
Arg	Pro	Glu	Asp	Thr	Ala	Leu	Tyr	Tyr	Cys	Thr	Ile	Gly	Gly	Ser	Leu
				405					410					415	
Ser	Arg	Ser	Ser	Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser	Ala		
			420					425					430		

<210> 131
 <211> 115
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 131
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Asn
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30
 Gly Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Ser Ile Ser Gly Ser Gly Ser Asp Thr Leu Tyr Ala Asp Ser Val
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Thr Thr Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Thr Ile Gly Gly Ser Leu Ser Arg Ser Ser Gln Gly Thr Leu Val Thr
 100 105 110
 Val Ser Ser
 115

<210> 132
 <211> 115
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 132
 Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Arg Ser Phe
 20 25 30
 Gly Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Pro Glu Trp Val
 35 40 45
 Ser Ser Ile Ser Gly Ser Gly Ser Asp Thr Leu Tyr Ala Asp Ser Val

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

<210> 135
 <211> 115
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

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

<210> 136
 <211> 116
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 136
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Asn
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30
 Gly Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Ser Ile Ser Gly Ser Gly Ser Asp Thr Leu Tyr Ala Asp Ser Val
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Thr Thr Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Thr Ile Gly Gly Ser Leu Ser Arg Ser Ser Gln Gly Thr Leu Val Lys
 100 105 110
 Val Ser Ser Ala
 115

<210> 137
 <211> 115
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 137
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Asn
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30
 Gly Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Ser Ile Ser Gly Ser Gly Ser Asp Thr Leu Tyr Ala Asp Ser Val
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Thr Thr Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Leu Tyr Tyr Cys
 85 90 95
 Thr Ile Gly Gly Ser Leu Ser Arg Ser Ser Gln Gly Thr Leu Val Thr
 100 105 110
 Val Ser Ser
 115

<210> 138
 <211> 116
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 138

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

<210> 139

<211> 117

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 139

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

<210> 140

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

<220>
<223> Amino acid sequence

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

<210> 141
<211> 116
<212> PRT
<213> Artificial Sequence

<220>
<223> Amino acid sequence

<400> 141
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Asn
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
20 25 30
Gly Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Ser Ile Ser Gly Ser Gly Ser Asp Thr Leu Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Thr Thr Leu Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Leu Tyr Tyr Cys
85 90 95
Thr Ile Gly Gly Ser Leu Ser Arg Ser Ser Gln Gly Thr Leu Val Thr
100 105 110

Val Ser Ser Gly
115

<210> 142
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<223> Amino acid sequence

<400> 142
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Asn
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
20 25 30
Gly Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Ser Ile Ser Gly Ser Gly Ser Asp Thr Leu Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Thr Thr Leu Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Leu Tyr Tyr Cys
85 90 95
Thr Ile Gly Gly Ser Leu Ser Arg Ser Ser Gln Gly Thr Leu Val Thr
100 105 110
Val Ser Ser Gly Gly
115

<210> 143
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> Amino acid sequence

<400> 143
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Asn
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
20 25 30
Gly Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Ser Ile Ser Gly Ser Gly Ser Asp Thr Leu Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Thr Thr Leu Tyr
65 70 75 80

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

<210> 144
 <211> 115
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 144
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Arg Ser Phe
 20 25 30
 Gly Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Pro Glu Trp Val
 35 40 45
 Ser Ser Ile Ser Gly Ser Gly Ser Asp Thr Leu Tyr Ala Asp Ser Val
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Leu Tyr Tyr Cys
 85 90 95
 Thr Ile Gly Gly Ser Leu Ser Arg Ser Ser Gln Gly Thr Leu Val Thr
 100 105 110
 Val Ser Ser
 115

<210> 145
 <211> 116
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 145
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Arg Ser Phe
 20 25 30
 Gly Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Pro Glu Trp Val
 35 40 45

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

<210> 146
 <211> 5
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 146
 Ser Phe Gly Met Ser
 1 5

<210> 147
 <211> 17
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 147
 Ser Ile Ser Gly Ser Gly Ser Asp Thr Leu Tyr Ala Asp Ser Val Lys
 1 5 10 15
 Gly

<210> 148
 <211> 6
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 148
 Gly Gly Ser Leu Ser Arg

1 5

<210> 149
 <211> 930
 <212> PRT
 <213> Homo sapiens

<220>
 <223> Amino acid sequence

<400> 149

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

Ala	Ser	Ile	Glu	Asn	His	Ile	Arg	Leu	Ala	Val	Val	Lys	Val	Val	Val
305					310					315					320
Leu	Gly	Asp	Lys	Asp	Lys	Ser	Leu	Glu	Val	Ser	Lys	Asn	Ala	Ala	Thr
				325					330						335
Thr	Leu	Lys	Asn	Phe	Cys	Lys	Trp	Gln	His	Gln	His	Asn	Gln	Leu	Gly
			340					345					350		
Asp	Asp	His	Glu	Glu	His	Tyr	Asp	Ala	Ala	Ile	Leu	Phe	Thr	Arg	Glu
		355					360					365			
Asp	Leu	Cys	Gly	His	His	Ser	Cys	Asp	Thr	Leu	Gly	Met	Ala	Asp	Val
	370					375					380				
Gly	Thr	Ile	Cys	Ser	Pro	Glu	Arg	Ser	Cys	Ala	Val	Ile	Glu	Asp	Asp
385					390					395					400
Gly	Leu	His	Ala	Ala	Phe	Thr	Val	Ala	His	Glu	Ile	Gly	His	Leu	Leu
			405					410							415
Gly	Leu	Ser	His	Asp	Asp	Ser	Lys	Phe	Cys	Glu	Glu	Thr	Phe	Gly	Ser
			420					425					430		
Thr	Glu	Asp	Lys	Arg	Leu	Met	Ser	Ser	Ile	Leu	Thr	Ser	Ile	Asp	Ala
		435					440					445			
Ser	Lys	Pro	Trp	Ser	Lys	Cys	Thr	Ser	Ala	Thr	Ile	Thr	Glu	Phe	Leu
	450					455					460				
Asp	Asp	Gly	His	Gly	Asn	Cys	Leu	Leu	Asp	Leu	Pro	Arg	Lys	Gln	Ile
465					470					475					480
Leu	Gly	Pro	Glu	Glu	Leu	Pro	Gly	Gln	Thr	Tyr	Asp	Ala	Thr	Gln	Gln
			485					490							495
Cys	Asn	Leu	Thr	Phe	Gly	Pro	Glu	Tyr	Ser	Val	Cys	Pro	Gly	Met	Asp
		500						505					510		
Val	Cys	Ala	Arg	Leu	Trp	Cys	Ala	Val	Val	Arg	Gln	Gly	Gln	Met	Val
		515					520					525			
Cys	Leu	Thr	Lys	Lys	Leu	Pro	Ala	Val	Glu	Gly	Thr	Pro	Cys	Gly	Lys
	530					535					540				
Gly	Arg	Ile	Cys	Leu	Gln	Gly	Lys	Cys	Val	Asp	Lys	Thr	Lys	Lys	Lys
545					550					555					560
Tyr	Tyr	Ser	Thr	Ser	Ser	His	Gly	Asn	Trp	Gly	Ser	Trp	Gly	Ser	Trp
			565					570							575
Gly	Gln	Cys	Ser	Arg	Ser	Cys	Gly	Gly	Gly	Val	Gln	Phe	Ala	Tyr	Arg
			580					585					590		
His	Cys	Asn	Asn	Pro	Ala	Pro	Arg	Asn	Asn	Gly	Arg	Tyr	Cys	Thr	Gly
		595					600					605			
Lys	Arg	Ala	Ile	Tyr	Arg	Ser	Cys	Ser	Leu	Met	Pro	Cys	Pro	Pro	Asn
	610					615					620				
Gly	Lys	Ser	Phe	Arg	His	Glu	Gln	Cys	Glu	Ala	Lys	Asn	Gly	Tyr	Gln
625					630					635					640
Ser	Asp	Ala	Lys	Gly	Val	Lys	Thr	Phe	Val	Glu	Trp	Val	Pro	Lys	Tyr
			645					650							655
Ala	Gly	Val	Leu	Pro	Ala	Asp	Val	Cys	Lys	Leu	Thr	Cys	Arg	Ala	Lys
			660					665					670		
Gly	Thr	Gly	Tyr	Tyr	Val	Val	Phe	Ser	Pro	Lys	Val	Thr	Asp	Gly	Thr
		675					680					685			
Glu	Cys	Arg	Leu	Tyr	Ser	Asn	Ser	Val	Cys	Val	Arg	Gly	Lys	Cys	Val
	690					695					700				

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

<210> 150

<211> 636

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 150

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

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

465		470		475		480									
Arg	Lys	Gln	Ile	Pro	Gly	Pro	Glu	Glu	Leu	Pro	Gly	Gln	Thr	Tyr	Asp
		485				490								495	
Ala	Ser	Gln	Gln	Cys	Asn	Leu	Thr	Phe	Gly	Pro	Glu	Tyr	Ser	Val	Cys
		500						505					510		
Pro	Gly	Met	Asp	Val	Cys	Ala	Arg	Leu	Trp	Cys	Ala	Val	Val	Arg	Gln
		515					520					525			
Gly	Gln	Met	Val	Cys	Leu	Thr	Lys	Lys	Leu	Pro	Ala	Val	Glu	Gly	Thr
		530				535					540				
Pro	Cys	Gly	Lys	Gly	Arg	Ile	Cys	Leu	Gln	Gly	Lys	Cys	Val	Asp	Lys
545					550					555					560
Thr	Lys	Lys	Lys	Tyr	Tyr	Ser	Thr	Ser	Ser	His	Gly	Asn	Trp	Gly	Ser
				565				570						575	
Trp	Gly	Ser	Trp	Gly	Gln	Cys	Ser	Arg	Ser	Cys	Gly	Gly	Gly	Val	Gln
		580						585					590		
Phe	Ala	Tyr	Arg	His	Cys	Asn	Asn	Pro	Ala	Pro	Arg	Asn	Asn	Gly	Arg
		595					600					605			
Tyr	Cys	Thr	Gly	Lys	Arg	Ala	Ile	Tyr	Arg	Ser	Cys	Ser	Val	Thr	Pro
	610					615					620				
Cys	Pro	His	His	His	His	His	His	His	His	His	His				
625					630					635					

<210> 151
 <211> 629
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Amino acid sequence

<400> 151

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

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

Cys Leu Gln Gly Lys Cys Val Asp Lys Thr Lys Lys Lys Tyr Tyr Ser
 545 550 555 560
 Thr Ser Ser His Gly Asn Trp Gly Ser Trp Gly Pro Trp Gly Gln Cys
 565 570 575
 Ser Arg Ser Cys Gly Gly Gly Val Gln Phe Ala Tyr Arg His Cys Asn
 580 585 590
 Asn Pro Ala Pro Arg Asn Ser Gly Arg Tyr Cys Thr Gly Lys Arg Ala
 595 600 605
 Ile Tyr Arg Ser Cys Ser Val Ile Pro Cys Pro His His His His His
 610 615 620
 His His His His His
 625

<210> 152

<211> 632

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 152

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

210	215	220
His Asn Ser Pro Gly Arg	His Ser Thr Val Asp	Pro Gln Leu Pro Glu
225	230	235
Leu Ser Ala Leu Ser Pro	Ala Gly Asp Pro Gly	Gln Gln Ile Trp Trp
245	250	255
Arg Arg Arg Arg Arg	Ser Ile Ser Arg Ala	Arg Gln Val Glu Leu Leu
260	265	270
Leu Val Ala Asp Gly Ser	Met Ala Lys Met Tyr	Gly Arg Gly Leu Gln
275	280	285
His Tyr Leu Leu Thr Leu	Ala Ser Ile Ala Asn	Arg Leu Tyr Ser His
290	295	300
Ala Ser Ile Glu Asn His	Ile Arg Leu Ala Val	Val Lys Val Val Val
305	310	315
Leu Gly Asp Lys Asp Lys	Ser Leu Glu Val Ser	Lys Asn Ala Ala Thr
325	330	335
Thr Leu Lys Asn Phe Cys	Lys Trp Gln His Gln	His Asn Gln Leu Gly
340	345	350
Asp Asp His Glu Glu His	Tyr Asp Ala Ala Ile	Leu Phe Thr Arg Glu
355	360	365
Asp Leu Cys Gly His His	Ser Cys Asp Thr Leu	Gly Met Ala Asp Val
370	375	380
Gly Thr Ile Cys Ser Pro	Glu Arg Ser Cys Ala	Val Ile Glu Asp Asp
385	390	395
Gly Leu His Ala Ala Phe	Thr Val Ala His Glu	Ile Gly His Leu Leu
405	410	415
Gly Leu Ser His Asp Asp	Ser Lys Phe Cys Glu	Glu Asn Phe Gly Leu
420	425	430
Thr Glu Asp Lys Arg Leu	Met Ser Ser Ile Leu	Thr Ser Ile Asp Ala
435	440	445
Ser Lys Pro Trp Ser Lys	Cys Thr Ser Ala Thr	Met Thr Glu Phe Leu
450	455	460
Asp Asp Gly His Gly Asn	Cys Leu Leu Asp Val	Pro Arg Lys Gln Ile
465	470	475
Pro Ser Pro Glu Glu Leu	Pro Gly Gln Thr Tyr	Asp Ala Thr Gln Gln
485	490	495
Cys Asn Leu Thr Phe Gly	Pro Glu Tyr Ser Val	Cys Pro Gly Met Asp
500	505	510
Val Cys Ala Arg Leu Trp	Cys Ala Val Val Arg	Gln Gly Gln Met Val
515	520	525
Cys Leu Thr Lys Lys Leu	Pro Ala Val Glu Gly	Thr Pro Cys Gly Lys
530	535	540
Gly Arg Ile Cys Leu Gln	Gly Lys Cys Val Asp	Lys Thr Lys Lys Lys
545	550	555
Tyr Tyr Ser Thr Ser Ser	His Gly Asn Trp Gly	Ser Trp Gly Pro Trp
565	570	575
Gly Gln Cys Ser Arg Ser	Cys Gly Gly Gly Val	Gln Phe Ala Tyr Arg
580	585	590
His Cys Asn Asn Pro Ala	Pro Arg Asn Ser Gly	Arg Tyr Cys Thr Gly
595	600	605
Lys Arg Ala Ile Tyr Arg	Ser Cys Ser Val Thr	Pro Cys Pro His His

610
His His His His His His His His
625 630

620

<210> 153
<211> 632
<212> PRT
<213> Artificial Sequence

<220>
<223> Amino acid sequence

<400> 153
Met Arg Leu Glu Trp Ala Pro Leu Leu Leu Leu Leu Leu Leu Ser
1 5 10 15
Ala Ser Cys Leu Ser Leu Ala Ala Asp Ser Pro Ala Ala Ala Pro Ala
20 25 30
Gln Asp Lys Thr Arg Gln Pro Gln Ala Ala Ala Ala Ala Glu Pro
35 40 45
Asp Gln Pro Gln Gly Glu Glu Thr Arg Glu Arg Gly His Leu Gln Pro
50 55 60
Leu Ala Gly Gln Arg Arg Ser Gly Gly Leu Val Gln Asn Ile Asp Gln
65 70 75 80
Leu Tyr Ser Gly Gly Gly Lys Val Gly Tyr Leu Val Tyr Ala Gly Gly
85 90 95
Arg Arg Phe Leu Leu Asp Leu Glu Arg Asp Asp Thr Val Gly Ala Ala
100 105 110
Gly Ser Ile Val Thr Ala Gly Gly Gly Leu Ser Ala Ser Ser Gly His
115 120 125
Arg Gly His Cys Phe Tyr Arg Gly Thr Val Asp Gly Ser Pro Arg Ser
130 135 140
Leu Ala Val Phe Asp Leu Cys Gly Gly Leu Asp Gly Phe Phe Ala Val
145 150 155 160
Lys His Ala Arg Tyr Thr Leu Lys Pro Leu Leu Arg Gly Ser Trp Ala
165 170 175
Glu Tyr Glu Arg Ile Tyr Gly Asp Gly Ser Ser Arg Ile Leu His Val
180 185 190
Tyr Asn Arg Glu Gly Phe Ser Phe Glu Ala Leu Pro Pro Arg Ala Ser
195 200 205
Cys Glu Thr Pro Ala Ser Pro Ser Gly Pro Gln Glu Ser Pro Ser Val
210 215 220
His Ser Arg Ser Arg Arg Arg Ser Ala Leu Ala Pro Gln Leu Leu Asp
225 230 235 240
His Ser Ala Phe Ser Pro Ser Gly Asn Ala Gly Pro Gln Thr Trp Trp
245 250 255
Arg Arg Arg Arg Arg Ser Ile Ser Arg Ala Arg Gln Val Glu Leu Leu
260 265 270
Leu Val Ala Asp Ser Ser Met Ala Arg Met Tyr Gly Arg Gly Leu Gln
275 280 285

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

<210> 154

<211> 632

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence

<400> 154

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

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Glu	Asn	Glu	Thr	Gly	Glu	Ala	Thr	Arg	Pro	Trp	Gly	Phe	Pro	Thr	Pro		
		435					440					445					
Gly	Leu	Gly	Pro	Ala	Thr	Ala	Phe	Thr	Ser	Glu	Asp	Leu	Val	Val	Gln		
	450					455					460						
Val	Thr	Ala	Val	Pro	Gly	Gln	Pro	His	Leu	Pro	Gly	Gly	Val	Val	Phe		
465					470					475					480		
His	Tyr	Arg	Pro	Gly	Pro	Thr	Arg	Tyr	Ser	Leu	Thr	Phe	Glu	Glu	Ala		
				485					490					495			
Gln	Gln	Ala	Cys	Pro	Gly	Thr	Gly	Ala	Val	Ile	Ala	Ser	Pro	Glu	Gln		
			500					505					510				
Leu	Gln	Ala	Ala	Tyr	Glu	Ala	Gly	Tyr	Glu	Gln	Cys	Asp	Ala	Gly	Trp		
		515					520					525					
Leu	Arg	Asp	Gln	Thr	Val	Arg	Tyr	Pro	Ile	Val	Ser	Pro	Arg	Thr	Pro		
	530					535					540						
Cys	Val	Gly	Asp	Lys	Asp	Ser	Ser	Pro	Gly	Val	Arg	Thr	Tyr	Gly	Val		
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Arg	Pro	Ser	Thr	Glu	Thr	Tyr	Asp	Val	Tyr	Cys	Phe	Val	Asp	Arg	Leu		
				565				570						575			
Glu	Gly	Glu	Val	Phe	Phe	Ala	Thr	Arg	Leu	Glu	Gln	Phe	Thr	Phe	Gln		
			580					585					590				
Glu	Ala	Leu	Glu	Phe	Cys	Glu	Ser	His	Asn	Ala	Thr	Ala	Thr	Thr	Gly		
		595					600					605					
Gln	Leu	Tyr	Ala	Ala	Trp	Ser	Arg	Gly	Leu	Asp	Lys	Cys	Tyr	Ala	Gly		
	610					615					620						
Trp	Leu	Ala	Asp	Gly	Ser	Leu	Arg	Tyr	Pro	Ile	Val	Thr	Pro	Arg	Pro		
625					630					635					640		
Ala	Cys	Gly	Gly	Asp	Lys	Pro	Gly	Val	Arg	Thr	Val	Tyr	Leu	Tyr	Pro		
				645					650					655			
Asn	Gln	Thr	Gly	Leu	Pro	Asp	Pro	Leu	Ser	Arg	His	His	Ala	Phe	Cys		
			660					665					670				
Phe	Arg	Gly	Ile	Ser	Ala	Val	Pro	Ser	Pro	Gly	Glu	Glu	Glu	Gly	Gly		
	675						680					685					
Thr	Pro	Thr	Ser	Pro	Ser	Gly	Val	Glu	Glu	Trp	Ile	Val	Thr	Gln	Val		
	690					695					700						
Val	Pro	Gly	Val	Ala	Ala	Val	Pro	Val	Glu	Glu	Glu	Thr	Thr	Ala	Val		
705					710					715					720		
Pro	Ser	Gly	Glu	Thr	Thr	Ala	Ile	Leu	Glu	Phe	Thr	Thr	Glu	Pro	Glu		
				725					730					735			
Asn	Gln	Thr	Glu	Trp	Glu	Pro	Ala	Tyr	Thr	Pro	Val	Gly	Thr	Ser	Pro		
			740					745					750				
Leu	Pro	Gly	Ile	Leu	Pro	Thr	Trp	Pro	Pro	Thr	Gly	Ala	Glu	Thr	Glu		
		755					760					765					
Glu	Ser	Thr	Glu	Gly	Pro	Ser	Ala	Thr	Glu	Val	Pro	Ser	Ala	Ser	Glu		
	770					775					780						
Glu	Pro	Ser	Pro	Ser	Glu	Val	Pro	Phe	Pro	Ser	Glu	Glu	Pro	Ser	Pro		
785					790					795					800		
Ser	Glu	Glu	Pro	Phe	Pro	Ser	Val	Arg	Pro	Phe	Pro	Ser	Val	Glu	Leu		
				805					810					815			
Phe	Pro	Ser	Glu	Glu	Pro	Phe	Pro	Ser	Lys	Glu	Pro	Ser	Pro	Ser	Glu		
			820					825					830				

Glu Pro Ser Ala Ser Glu Glu Pro Tyr Thr Pro Ser Pro Pro Glu Pro
 835 840 845
 Ser Trp Thr Glu Leu Pro Ser Ser Gly Glu Glu Ser Gly Ala Pro Asp
 850 855 860
 Val Ser Gly Asp Phe Thr Gly Ser Gly Asp Val Ser Gly His Leu Asp
 865 870 875 880
 Phe Ser Gly Gln Leu Ser Gly Asp Arg Ala Ser Gly Leu Pro Ser Gly
 885 890 895
 Asp Leu Asp Ser Ser Gly Leu Thr Ser Thr Val Gly Ser Gly Leu Thr
 900 905 910
 Val Glu Ser Gly Leu Pro Ser Gly Asp Glu Glu Arg Ile Glu Trp Pro
 915 920 925
 Ser Thr Pro Thr Val Gly Glu Leu Pro Ser Gly Ala Glu Ile Leu Glu
 930 935 940
 Gly Ser Ala Ser Gly Val Gly Asp Leu Ser Gly Leu Pro Ser Gly Glu
 945 950 955 960
 Val Leu Glu Thr Ser Ala Ser Gly Val Gly Asp Leu Ser Gly Leu Pro
 965 970 975
 Ser Gly Glu Val Leu Glu Thr Thr Ala Pro Gly Val Glu Asp Ile Ser
 980 985 990
 Gly Leu Pro Ser Gly Glu Val Leu Glu Thr Thr Ala Pro Gly Val Glu
 995 1000 1005
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 Val Glu Asp Ile Ser Gly Leu Pro Ser Gly Glu Val Leu Glu Thr Ala
 1125 1130 1135
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 1140 1145 1150
 Glu Thr Ala Ala Pro Gly Val Glu Asp Ile Ser Gly Leu Pro Ser Gly
 1155 1160 1165
 Glu Val Leu Glu Thr Ala Ala Pro Gly Val Glu Asp Ile Ser Gly Leu
 1170 1175 1180
 Pro Ser Gly Glu Val Leu Glu Thr Ala Ala Pro Gly Val Glu Asp Ile
 1185 1190 1195 1200
 Ser Gly Leu Pro Ser Gly Glu Val Leu Glu Thr Ala Ala Pro Gly Val
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 Glu Asp Ile Ser Gly Leu Pro Ser Gly Glu Val Leu Glu Thr Ala Ala
 1220 1225 1230

Pro Gly Val Glu Asp Ile Ser Gly Leu Pro Ser Gly Glu Val Leu Glu
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 Thr Ala Ala Pro Gly Val Glu Asp Ile Ser Gly Leu Pro Ser Gly Glu
 1250 1255 1260
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 Ser Gly Glu Val Leu Glu Thr Thr Ala Pro Gly Val Glu Glu Ile Ser
 1285 1290 1295
 Gly Leu Pro Ser Gly Glu Val Leu Glu Thr Thr Ala Pro Gly Val Asp
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 Glu Ile Ser Gly Leu Pro Ser Gly Glu Val Leu Glu Thr Thr Ala Pro
 1315 1320 1325
 Gly Val Glu Glu Ile Ser Gly Leu Pro Ser Gly Glu Val Leu Glu Thr
 1330 1335 1340
 Ser Thr Ser Ala Val Gly Asp Leu Ser Gly Leu Pro Ser Gly Gly Glu
 1345 1350 1355 1360
 Val Leu Glu Ile Ser Val Ser Gly Val Glu Asp Ile Ser Gly Leu Pro
 1365 1370 1375
 Ser Gly Glu Val Val Glu Thr Ser Ala Ser Gly Ile Glu Asp Val Ser
 1380 1385 1390
 Glu Leu Pro Ser Gly Glu Gly Leu Glu Thr Ser Ala Ser Gly Val Glu
 1395 1400 1405
 Asp Leu Ser Arg Leu Pro Ser Gly Glu Glu Val Leu Glu Ile Ser Ala
 1410 1415 1420
 Ser Gly Phe Gly Asp Leu Ser Gly Val Pro Ser Gly Gly Glu Gly Leu
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 Glu Thr Ser Ala Ser Glu Val Gly Thr Asp Leu Ser Gly Leu Pro Ser
 1445 1450 1455
 Gly Arg Glu Gly Leu Glu Thr Ser Ala Ser Gly Ala Glu Asp Leu Ser
 1460 1465 1470
 Gly Leu Pro Ser Gly Lys Glu Asp Leu Val Gly Ser Ala Ser Gly Asp
 1475 1480 1485
 Leu Asp Leu Gly Lys Leu Pro Ser Gly Thr Leu Gly Ser Gly Gln Ala
 1490 1495 1500
 Pro Glu Thr Ser Gly Leu Pro Ser Gly Phe Ser Gly Glu Tyr Ser Gly
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 Val Asp Leu Gly Ser Gly Pro Pro Ser Gly Leu Pro Asp Phe Ser Gly
 1525 1530 1535
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 1540 1545 1550
 Glu Val Val Thr Ala Ser Thr Ala Ser Glu Leu Glu Gly Arg Gly Thr
 1555 1560 1565
 Ile Gly Ile Ser Gly Ala Gly Glu Ile Ser Gly Leu Pro Ser Ser Glu
 1570 1575 1580
 Leu Asp Ile Ser Gly Arg Ala Ser Gly Leu Pro Ser Gly Thr Glu Leu
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 Ser Gly Gln Ala Ser Gly Ser Pro Asp Val Ser Gly Glu Ile Pro Gly
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 Leu Phe Gly Val Ser Gly Gln Pro Ser Gly Phe Pro Asp Thr Ser Gly
 1620 1625 1630

Glu Thr Ser Gly Val Thr Glu Leu Ser Gly Leu Ser Ser Gly Gln Pro
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 Gly Val Ser Gly Glu Ala Ser Gly Val Leu Tyr Gly Thr Ser Gln Pro
 1650 1655 1660
 Phe Gly Ile Thr Asp Leu Ser Gly Glu Thr Ser Gly Val Pro Asp Leu
 1665 1670 1675 1680
 Ser Gly Gln Pro Ser Gly Leu Pro Gly Phe Ser Gly Ala Thr Ser Gly
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 Val Pro Asp Leu Val Ser Gly Thr Thr Ser Gly Ser Gly Glu Ser Ser
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 Phe Lys Glu Glu Glu Gly Leu Gly Ser Val Glu Leu Ser Gly Leu Pro
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 Ser Gly Glu Ala Asp Leu Ser Gly Lys Ser Gly Met Val Asp Val Ser
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 Pro Glu Phe Ser Gly Leu Pro Ser Gly Ile Ala Glu Val Ser Gly Glu
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 Ser Ser Arg Ala Glu Ile Gly Ser Ser Leu Pro Ser Gly Ala Tyr Tyr
 1795 1800 1805
 Gly Ser Gly Thr Pro Ser Ser Phe Pro Thr Val Ser Leu Val Asp Arg
 1810 1815 1820
 Thr Leu Val Glu Ser Val Thr Gln Ala Pro Thr Ala Gln Glu Ala Gly
 1825 1830 1835 1840
 Glu Gly Pro Ser Gly Ile Leu Glu Leu Ser Gly Ala His Ser Gly Ala
 1845 1850 1855
 Pro Asp Met Ser Gly Glu His Ser Gly Phe Leu Asp Leu Ser Gly Leu
 1860 1865 1870
 Gln Ser Gly Leu Ile Glu Pro Ser Gly Glu Pro Pro Gly Thr Pro Tyr
 1875 1880 1885
 Phe Ser Gly Asp Phe Ala Ser Thr Thr Asn Val Ser Gly Glu Ser Ser
 1890 1895 1900
 Val Ala Met Gly Thr Ser Gly Glu Ala Ser Gly Leu Pro Glu Val Thr
 1905 1910 1915 1920
 Leu Ile Thr Ser Glu Phe Val Glu Gly Val Thr Glu Pro Thr Ile Ser
 1925 1930 1935
 Gln Glu Leu Gly Gln Arg Pro Pro Val Thr His Thr Pro Gln Leu Phe
 1940 1945 1950
 Glu Ser Ser Gly Lys Val Ser Thr Ala Gly Asp Ile Ser Gly Ala Thr
 1955 1960 1965
 Pro Val Leu Pro Gly Ser Gly Val Glu Val Ser Ser Val Pro Glu Ser
 1970 1975 1980
 Ser Ser Glu Thr Ser Ala Tyr Pro Glu Ala Gly Phe Gly Ala Ser Ala
 1985 1990 1995 2000
 Ala Pro Glu Ala Ser Arg Glu Asp Ser Gly Ser Pro Asp Leu Ser Glu
 2005 2010 2015
 Thr Thr Ser Ala Phe His Glu Ala Asn Leu Glu Arg Ser Ser Gly Leu
 2020 2025 2030

Gly Val Ser Gly Ser Thr Leu Thr Phe Gln Glu Gly Glu Ala Ser Ala
 2035 2040 2045
 Ala Pro Glu Val Ser Gly Glu Ser Thr Thr Thr Ser Asp Val Gly Thr
 2050 2055 2060
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 2065 2070 2075 2080
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 2085 2090 2095
 Val Ile Ser Thr Ser Ile Pro Glu Ser Glu Trp Thr Gln Gln Thr Gln
 2100 2105 2110
 Arg Pro Ala Glu Thr His Leu Glu Ile Glu Ser Ser Ser Leu Leu Tyr
 2115 2120 2125
 Ser Gly Glu Glu Thr His Thr Val Glu Thr Ala Thr Ser Pro Thr Asp
 2130 2135 2140
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 2145 2150 2155 2160
 Ala Ala Ala Pro Ala Arg Ser Cys Ala Glu Glu Pro Cys Gly Ala Gly
 2165 2170 2175
 Thr Cys Lys Glu Thr Glu Gly His Val Ile Cys Leu Cys Pro Pro Gly
 2180 2185 2190
 Tyr Thr Gly Glu His Cys Asn Ile Asp Gln Glu Val Cys Glu Glu Gly
 2195 2200 2205
 Trp Asn Lys Tyr Gln Gly His Cys Tyr Arg His Phe Pro Asp Arg Glu
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 Thr Trp Val Asp Ala Glu Arg Arg Cys Arg Glu Gln Gln Ser His Leu
 2225 2230 2235 2240
 Ser Ser Ile Val Thr Pro Glu Glu Gln Glu Phe Val Asn Asn Asn Ala
 2245 2250 2255
 Gln Asp Tyr Gln Trp Ile Gly Leu Asn Asp Arg Thr Ile Glu Gly Asp
 2260 2265 2270
 Phe Arg Trp Ser Asp Gly His Pro Met Gln Phe Glu Asn Trp Arg Pro
 2275 2280 2285
 Asn Gln Pro Asp Asn Phe Phe Ala Ala Gly Glu Asp Cys Val Val Met
 2290 2295 2300
 Ile Trp His Glu Lys Gly Glu Trp Asn Asp Val Pro Cys Asn Tyr His
 2305 2310 2315 2320
 Leu Pro Phe Thr Cys Lys Lys Gly Thr Val Ala Cys Gly Glu Pro Pro
 2325 2330 2335
 Val Val Glu His Ala Arg Thr Phe Gly Gln Lys Lys Asp Arg Tyr Glu
 2340 2345 2350
 Ile Asn Ser Leu Val Arg Tyr Gln Cys Thr Glu Gly Phe Val Gln Arg
 2355 2360 2365
 His Met Pro Thr Ile Arg Cys Gln Pro Ser Gly His Trp Glu Glu Pro
 2370 2375 2380
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 2385 2390 2395 2400
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 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Ser Thr Phe Ile Ile Asn
 20 25 30
 Val Val Arg Trp Tyr Arg Arg Ala Pro Gly Lys Gln Arg Glu Leu Val
 35 40 45
 Ala Thr Ile Ser Ser Gly Gly Asn Ala Asn Tyr Val Asp Ser Val Arg
 50 55 60
 Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Val Tyr Leu
 65 70 75 80
 Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Leu Tyr Tyr Cys Asn
 85 90 95
 Val Pro Thr Thr His Tyr Gly Gly Val Tyr Tyr Gly Pro Tyr Trp Gly
 100 105 110
 Gln Gly Thr Leu Val Thr Val Ser Ser Ala
 115 120

<210> 157
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 <212> PRT
 <213> Artificial Sequence

<220>
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 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Arg Thr Phe Ser Ser Tyr
 20 25 30
 Thr Met Gly Trp Phe Arg Gln Ala Pro Gly Lys Glu Arg Glu Phe Val
 35 40 45
 Ala Ala Ile Ser Trp Ser Gly Gly Arg Thr Tyr Tyr Ala Asp Ser Val
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Val Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Leu Tyr Tyr Cys
 85 90 95
 Ala Ala Tyr Arg Arg Arg Arg Ala Ser Ser Asn Arg Gly Leu Trp Asp
 100 105 110

Tyr	Trp	Gly	Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser	Ala
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Ser Gly Gly Ser Gly Gly Ser

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Gly Gly Gly Gly Gly Gly Gly Ser

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<210> 163

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Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
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Gly Ser

<210> 166
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1 5 10 15
Gly Gly Gly Ser
20

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1 5 10 15
Gly Gly Gly Ser Gly Gly Gly Gly Ser
20 25

<210> 168
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20 25 30

<210> 169
<211> 35
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20 25 30
Gly Gly Ser
35

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Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
20 25 30
Gly Gly Ser Gly Gly Gly Gly Ser
35 40

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<211> 15

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<211> 24

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<210> 174

<211> 62

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<213> Artificial Sequence

<220>

<223> Amino acid sequence

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Pro Glu Pro Lys Ser Cys Asp Thr Pro Pro Pro Cys Pro Arg Cys Pro
20 25 30
Glu Pro Lys Ser Cys Asp Thr Pro Pro Pro Cys Pro Arg Cys Pro Glu
35 40 45
Pro Lys Ser Cys Asp Thr Pro Pro Pro Cys Pro Arg Cys Pro
50 55 60