

SEQUENCE LISTING

<110> MORPHOSYS AG

<120> ANTIBODIES TARGETING C5AR

<130> MS294/EP-PROV

<140>

<141>

<160> 96

<170> PatentIn version 3.5

<210> 1

<211> 350

<212> PRT

<213> Homo sapiens

<400> 1

Met Asp Ser Phe Asn Tyr Thr Thr Pro Asp Tyr Gly His Tyr Asp Asp
1 5 10 15

Lys Asp Thr Leu Asp Leu Asn Thr Pro Val Asp Lys Thr Ser Asn Thr
20 25 30

Leu Arg Val Pro Asp Ile Leu Ala Leu Val Ile Phe Ala Val Val Phe
35 40 45

Leu Val Gly Val Leu Gly Asn Ala Leu Val Val Trp Val Thr Ala Phe
50 55 60

Glu Ala Lys Arg Thr Ile Asn Ala Ile Trp Phe Leu Asn Leu Ala Val
65 70 75 80

Ala Asp Phe Leu Ser Cys Leu Ala Leu Pro Ile Leu Phe Thr Ser Ile
85 90 95

Val Gln His His His Trp Pro Phe Gly Gly Ala Ala Cys Ser Ile Leu
100 105 110

Pro Ser Leu Ile Leu Leu Asn Met Tyr Ala Ser Ile Leu Leu Leu Ala
115 120 125

Thr Ile Ser Ala Asp Arg Phe Leu Leu Val Phe Lys Pro Ile Trp Cys

130

135

140

Gln Asn Phe Arg Gly Ala Gly Leu Ala Trp Ile Ala Cys Ala Val Ala
 145 150 155 160

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

Val Arg Glu Glu Tyr Phe Pro Pro Lys Val Leu Cys Gly Val Asp Tyr
 180 185 190

Ser His Asp Lys Arg Arg Glu Arg Ala Val Ala Ile Val Arg Leu Val
 195 200 205

Leu Gly Phe Leu Trp Pro Leu Leu Thr Leu Thr Ile Cys Tyr Thr Phe
 210 215 220

Ile Leu Leu Arg Thr Trp Ser Arg Arg Ala Thr Arg Ser Thr Lys Thr
 225 230 235 240

Leu Lys Val Val Val Ala Val Val Ala Ser Phe Phe Ile Phe Trp Leu
 245 250 255

Pro Tyr Gln Val Thr Gly Ile Met Met Ser Phe Leu Glu Pro Ser Ser
 260 265 270

Pro Thr Phe Leu Leu Leu Lys Lys Leu Asp Ser Leu Cys Val Ser Phe
 275 280 285

Ala Tyr Ile Asn Cys Cys Ile Asn Pro Ile Ile Tyr Val Val Ala Gly
 290 295 300

Gln Gly Phe Gln Gly Arg Leu Arg Lys Ser Leu Pro Ser Leu Leu Arg
 305 310 315 320

Asn Val Leu Thr Glu Glu Ser Val Val Arg Glu Ser Lys Ser Phe Thr
 325 330 335

Arg Ser Thr Val Asp Thr Met Ala Gln Lys Thr Gln Ala Val
 340 345 350

<210> 2
<211> 350
<212> PRT
<213> Homo sapiens

<400> 2

Met Asn Ser Phe Asn Tyr Thr Thr Pro Asp Tyr Gly His Tyr Asp Asp
1 5 10 15

Lys Asp Thr Leu Asp Leu Asn Thr Pro Val Asp Lys Thr Ser Asn Thr
20 25 30

Leu Arg Val Pro Asp Ile Leu Ala Leu Val Ile Phe Ala Val Val Phe
35 40 45

Leu Val Gly Val Leu Gly Asn Ala Leu Val Val Trp Val Thr Ala Phe
50 55 60

Glu Ala Lys Arg Thr Ile Asn Ala Ile Trp Phe Leu Asn Leu Ala Val
65 70 75 80

Ala Asp Phe Leu Ser Cys Leu Ala Leu Pro Ile Leu Phe Thr Ser Ile
85 90 95

Val Gln His His His Trp Pro Phe Gly Gly Ala Ala Cys Ser Ile Leu
100 105 110

Pro Ser Leu Ile Leu Leu Asn Met Tyr Ala Ser Ile Leu Leu Leu Ala
115 120 125

Thr Ile Ser Ala Asp Arg Phe Leu Leu Val Phe Lys Pro Ile Trp Cys
130 135 140

Gln Asn Phe Arg Gly Ala Gly Leu Ala Trp Ile Ala Cys Ala Val Ala
145 150 155 160

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

Val Arg Glu Glu Tyr Phe Pro Pro Lys Val Leu Cys Gly Val Asp Tyr
180 185 190

Ser His Asp Lys Arg Arg Glu Arg Ala Val Ala Ile Val Arg Leu Val
195 200 205

Leu Gly Phe Leu Trp Pro Leu Leu Thr Leu Thr Ile Cys Tyr Thr Phe
210 215 220

Ile Leu Leu Arg Thr Trp Ser Arg Arg Ala Thr Arg Ser Thr Lys Thr
225 230 235 240

Leu Lys Val Val Val Ala Val Val Ala Ser Phe Phe Ile Phe Trp Leu
245 250 255

Pro Tyr Gln Val Thr Gly Ile Met Met Ser Phe Leu Glu Pro Ser Ser
260 265 270

Pro Thr Phe Leu Leu Leu Asn Lys Leu Asp Ser Leu Cys Val Ser Phe
275 280 285

Ala Tyr Ile Asn Cys Cys Ile Asn Pro Ile Ile Tyr Val Val Ala Gly
290 295 300

Gln Gly Phe Gln Gly Arg Leu Arg Lys Ser Leu Pro Ser Leu Leu Arg
305 310 315 320

Asn Val Leu Thr Glu Glu Ser Val Val Arg Glu Ser Lys Ser Phe Thr
325 330 335

Arg Ser Thr Val Asp Thr Met Ala Gln Lys Thr Gln Ala Val
340 345 350

<210> 3

<211> 350

<212> PRT

<213> *Macaca fascicularis*

<400> 3

Met Asp Pro Phe Ser Ser Thr Thr Leu Asp Tyr Glu His Tyr Asp Gly
1 5 10 15

Lys Asn Val Leu Asp Ser Asp Thr Pro Val Asp Lys Thr Ser Asn Thr
20 25 30

Leu Arg Val Pro Asp Ile Leu Ala Leu Val Val Phe Ala Val Val Phe
35 40 45

Leu Val Gly Val Leu Gly Asn Ala Leu Val Val Trp Val Thr Ala Phe
50 55 60

Glu Val Lys Arg Thr Ile Asn Ala Ile Trp Phe Leu Asn Leu Ala Val
65 70 75 80

Ala Asp Phe Leu Ser Cys Leu Ala Leu Pro Ile Leu Phe Thr Ser Ile
85 90 95

Val Gln His His His Trp Pro Phe Gly Gly Thr Ala Cys Arg Ile Leu
100 105 110

Pro Ser Leu Ile Leu Leu Asn Met Tyr Ala Ser Ile Leu Leu Leu Ala
115 120 125

Thr Ile Ser Ala Asp Arg Phe Leu Leu Val Phe Asn Pro Ile Trp Cys
130 135 140

Gln Asn Phe Arg Gly Ala Gly Leu Ala Trp Ile Ala Cys Ala Val Ala
145 150 155 160

Trp Gly Leu Ala Leu Leu Leu Thr Ile Pro Ser Phe Leu Tyr Arg Ala
165 170 175

Val Arg Gln Glu Glu Tyr Ser Pro Lys Val Leu Cys Gly Val Asp Tyr
180 185 190

Asn Asn Asp Thr Arg Arg Glu Arg Ala Val Ala Ile Val Arg Leu Val
195 200 205

Leu Gly Phe Leu Trp Pro Leu Leu Thr Leu Met Ile Cys Tyr Thr Phe
210 215 220

Leu Leu Leu Arg Thr Trp Ser Arg Arg Ala Thr Arg Ser Thr Lys Thr
225 230 235 240

Leu Lys Val Val Val Ala Val Val Ala Ser Phe Phe Ile Phe Trp Leu

245

250

255

Pro Tyr Gln Val Thr Gly Thr Met Met Ser Phe Leu Arg Pro Ser Ser
 260 265 270

Pro Thr Tyr Leu Gln Leu Lys Lys Leu Asp Ser Leu Ser Ile Ser Phe
 275 280 285

Ala Tyr Ile Asn Cys Cys Ile Asn Pro Val Ile Tyr Val Val Ala Gly
 290 295 300

Gln Gly Phe Gln Gly Arg Leu Arg Lys Ser Leu Pro Ser Leu Leu Arg
 305 310 315 320

Asn Val Leu Thr Glu Glu Ser Val Val Arg Glu Ser Lys Ser Phe Thr
 325 330 335

Arg Ser Thr Val Asp Thr Met Thr Glu Lys Thr Gln Ala Val
 340 345 350

<210> 4

<211> 351

<212> PRT

<213> Mus musculus

<400> 4

Met Asp Pro Ile Asp Asn Ser Ser Phe Glu Ile Asn Tyr Asp His Tyr
 1 5 10 15

Gly Thr Met Ala Pro Asn Ile Pro Ala Asp Gly Ile His Leu Pro Lys
 20 25 30

Arg Gln Pro Gly Asp Val Ala Ala Leu Ile Ile Tyr Ser Val Val Phe
 35 40 45

Leu Val Gly Val Pro Gly Asn Ala Leu Val Val Trp Val Thr Ala Phe
 50 55 60

Glu Ala Arg Arg Ala Val Asn Ala Ile Trp Phe Leu Asn Leu Ala Val
 65 70 75 80

Ala Asp Leu Leu Ser Cys Leu Ala Leu Pro Val Leu Phe Thr Thr Val

85

90

95

Leu Asn His Asn Tyr Trp Tyr Phe Asp Ala Thr Ala Cys Ile Val Leu
 100 105 110

Pro Ser Leu Ile Leu Leu Asn Met Tyr Ala Ser Ile Leu Leu Leu Ala
 115 120 125

Thr Ile Ser Ala Asp Arg Phe Leu Leu Val Phe Lys Pro Ile Trp Cys
 130 135 140

Gln Lys Val Arg Gly Thr Gly Leu Ala Trp Met Ala Cys Gly Val Ala
 145 150 155 160

Trp Val Leu Ala Leu Leu Leu Thr Ile Pro Ser Phe Val Tyr Arg Glu
 165 170 175

Ala Tyr Lys Asp Phe Tyr Ser Glu His Thr Val Cys Gly Ile Asn Tyr
 180 185 190

Gly Gly Gly Ser Phe Pro Lys Glu Lys Ala Val Ala Ile Leu Arg Leu
 195 200 205

Met Val Gly Phe Val Leu Pro Leu Leu Thr Leu Asn Ile Cys Tyr Thr
 210 215 220

Phe Leu Leu Leu Arg Thr Trp Ser Arg Lys Ala Thr Arg Ser Thr Lys
 225 230 235 240

Thr Leu Lys Val Val Met Ala Val Val Ile Cys Phe Phe Ile Phe Trp
 245 250 255

Leu Pro Tyr Gln Val Thr Gly Val Met Ile Ala Trp Leu Pro Pro Ser
 260 265 270

Ser Pro Thr Leu Lys Arg Val Glu Lys Leu Asn Ser Leu Cys Val Ser
 275 280 285

Leu Ala Tyr Ile Asn Cys Cys Val Asn Pro Ile Ile Tyr Val Met Ala
 290 295 300

Gly Gln Gly Phe His Gly Arg Leu Leu Arg Ser Leu Pro Ser Ile Ile
305 310 315 320

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

Thr Pro Ser Thr Thr Asp Thr Ser Thr Arg Lys Ser Gln Ala Val
340 345 350

<210> 5

<211> 352

<212> PRT

<213> Rattus norvegicus

<400> 5

Met Asp Pro Ile Ser Asn Asp Ser Ser Glu Ile Thr Tyr Asp Tyr Ser
1 5 10 15

Asp Gly Thr Pro Asn Pro Asp Met Pro Ala Asp Gly Val Tyr Ile Pro
20 25 30

Lys Met Glu Pro Gly Asp Ile Ala Ala Leu Ile Ile Tyr Leu Ala Val
35 40 45

Phe Leu Val Gly Val Thr Gly Asn Ala Leu Val Val Trp Val Thr Ala
50 55 60

Phe Glu Ala Lys Arg Thr Val Asn Ala Ile Trp Phe Leu Asn Leu Ala
65 70 75 80

Val Ala Asp Leu Leu Ser Cys Leu Ala Leu Pro Ile Leu Phe Thr Ser
85 90 95

Ile Val Lys His Asn His Trp Pro Phe Gly Asp Gln Ala Cys Ile Val
100 105 110

Leu Pro Ser Leu Ile Leu Leu Asn Met Tyr Ser Ser Ile Leu Leu Leu
115 120 125

Ala Thr Ile Ser Ala Asp Arg Phe Leu Leu Val Phe Lys Pro Ile Trp
130 135 140

Cys Gln Lys Phe Arg Arg Pro Gly Leu Ala Trp Met Ala Cys Gly Val
145 150 155 160

Thr Trp Val Leu Ala Leu Leu Leu Thr Ile Pro Ser Phe Val Phe Arg
165 170 175

Arg Ile His Lys Asp Pro Tyr Ser Asp Ser Ile Leu Cys Asn Ile Asp
180 185 190

Tyr Ser Lys Gly Pro Phe Phe Ile Glu Lys Ala Ile Ala Ile Leu Arg
195 200 205

Leu Met Val Gly Phe Val Leu Pro Leu Leu Thr Leu Asn Ile Cys Tyr
210 215 220

Thr Phe Leu Leu Ile Arg Thr Trp Ser Arg Lys Ala Thr Arg Ser Thr
225 230 235 240

Lys Thr Leu Lys Val Val Met Ala Val Val Thr Cys Phe Phe Val Phe
245 250 255

Trp Leu Pro Tyr Gln Val Thr Gly Val Ile Leu Ala Trp Leu Pro Arg
260 265 270

Ser Ser Ser Thr Phe Gln Ser Val Glu Arg Leu Asn Ser Leu Cys Val
275 280 285

Ser Leu Ala Tyr Ile Asn Cys Cys Val Asn Pro Ile Ile Tyr Val Met
290 295 300

Ala Gly Gln Gly Phe His Gly Arg Leu Arg Arg Ser Leu Pro Ser Ile
305 310 315 320

Ile Arg Asn Val Leu Ser Glu Asp Ser Leu Gly Arg Asp Ser Lys Ser
325 330 335

Phe Thr Arg Ser Thr Met Asp Thr Ser Thr Gln Lys Ser Gln Ala Val
340 345 350

<211> 74
<212> PRT
<213> Homo sapiens

<400> 6
Thr Leu Gln Lys Lys Ile Glu Glu Ile Ala Ala Lys Tyr Lys His Ser
1 5 10 15

Val Val Lys Lys Cys Cys Tyr Asp Gly Ala Cys Val Asn Asn Asp Glu
20 25 30

Thr Cys Glu Gln Arg Ala Ala Arg Ile Ser Leu Gly Pro Arg Cys Ile
35 40 45

Lys Ala Phe Thr Glu Cys Cys Val Val Ala Ser Gln Leu Arg Ala Asn
50 55 60

Ile Ser His Lys Asp Met Gln Leu Gly Arg
65 70

<210> 7
<211> 337
<212> PRT
<213> Homo sapiens

<400> 7
Met Gly Asn Asp Ser Val Ser Tyr Glu Tyr Gly Asp Tyr Ser Asp Leu
1 5 10 15

Ser Asp Arg Pro Val Asp Cys Leu Asp Gly Ala Cys Leu Ala Ile Asp
20 25 30

Pro Leu Arg Val Ala Pro Leu Pro Leu Tyr Ala Ala Ile Phe Leu Val
35 40 45

Gly Val Pro Gly Asn Ala Met Val Ala Trp Val Ala Gly Lys Val Ala
50 55 60

Arg Arg Arg Val Gly Ala Thr Trp Leu Leu His Leu Ala Val Ala Asp
65 70 75 80

Leu Leu Cys Cys Leu Ser Leu Pro Ile Leu Ala Val Pro Ile Ala Arg
85 90 95

Gly Gly His Trp Pro Tyr Gly Ala Val Gly Cys Arg Ala Leu Pro Ser
100 105 110

Ile Ile Leu Leu Thr Met Tyr Ala Ser Val Leu Leu Leu Ala Ala Leu
115 120 125

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

Val Gln Arg Ala Cys Gly Val Gln Val Ala Cys Gly Ala Ala Trp Thr
145 150 155 160

Leu Ala Leu Leu Leu Thr Val Pro Ser Ala Ile Tyr Arg Arg Leu His
165 170 175

Gln Glu His Phe Pro Ala Arg Leu Gln Cys Val Val Asp Tyr Gly Gly
180 185 190

Ser Ser Ser Thr Glu Asn Ala Val Thr Ala Ile Arg Phe Leu Phe Gly
195 200 205

Phe Leu Gly Pro Leu Val Ala Val Ala Ser Cys His Ser Ala Leu Leu
210 215 220

Cys Trp Ala Ala Arg Arg Cys Arg Pro Leu Gly Thr Ala Ile Val Val
225 230 235 240

Gly Phe Phe Val Cys Trp Ala Pro Tyr His Leu Leu Gly Leu Val Leu
245 250 255

Thr Val Ala Ala Pro Asn Ser Ala Leu Leu Ala Arg Ala Leu Arg Ala
260 265 270

Glu Pro Leu Ile Val Gly Leu Ala Leu Ala His Ser Cys Leu Asn Pro
275 280 285

Met Leu Phe Leu Tyr Phe Gly Arg Ala Gln Leu Arg Arg Ser Leu Pro
290 295 300

Ala Ala Cys His Trp Ala Leu Arg Glu Ser Gln Gly Gln Asp Glu Ser

305		310		315		320
Val	Asp	Ser	Lys	Lys	Ser	Thr
			325			
				Asp	Leu	Val
				330		
					Ser	Glu
						Met
						335
						Glu
Val						
<210>	8					
<211>	482					
<212>	PRT					
<213>	Homo sapiens					
<400>	8					
Met	Ala	Ser	Phe	Ser	Ala	Glu
1				5		
					Thr	Asn
					10	
						Ser
						Thr
						Asp
						Leu
						Leu
						Ser
						15
						Gln
Pro	Trp	Asn	Glu	Pro	Pro	Val
			20			
						Ile
						25
						Leu
						Ser
						Met
						Val
						Ile
						30
						Leu
						Ser
						Leu
Thr	Phe	Leu	Leu	Gly	Leu	Pro
		35				
						Gly
						40
						Asn
						Gly
						Leu
						Val
						45
						Leu
						Trp
						Val
						Ala
Gly	Leu	Lys	Met	Gln	Arg	Thr
	50					
						Val
						55
						Asn
						Thr
						Ile
						60
						Trp
						Phe
						Leu
						His
						Leu
Thr	Leu	Ala	Asp	Leu	Leu	Cys
65					70	
						Cys
						Leu
						Ser
						75
						Leu
						Pro
						Phe
						Ser
						Leu
						Ala
						80
His	Leu	Ala	Leu	Gln	Gly	Gln
				85		
						Trp
						Pro
						90
						Tyr
						Gly
						Arg
						Phe
						Leu
						Cys
						95
						Lys
Leu	Ile	Pro	Ser	Ile	Ile	Val
			100			
						Leu
						Asn
						105
						Met
						Phe
						Ala
						Ser
						110
						Val
						Phe
						Lys
						Pro
						Ile
Leu	Thr	Ala	Ile	Ser	Leu	Asp
		115				
						Arg
						120
						Cys
						Leu
						Val
						125
						Phe
						Lys
						Pro
						Ile
Trp	Cys	Gln	Asn	His	Arg	Asn
	130					135
						Val
						Gly
						Met
						Ala
						Cys
						140
						Ser
						Ile
						Cys
						Gly
Cys	Ile	Trp	Val	Val	Ala	Cys
						Val
						Met
						Cys
						Ile
						Pro
						Val
						Phe
						Val
						Tyr

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

Ala Lys Ser Gln Ser Lys Thr Phe Arg Val Ala Val Val Val Val Ala
370 375 380

Val Phe Leu Val Cys Trp Thr Pro Tyr His Ile Phe Gly Val Leu Ser
385 390 395 400

Leu Leu Thr Asp Pro Glu Thr Pro Leu Gly Lys Thr Leu Met Ser Trp
405 410 415

Asp His Val Cys Ile Ala Leu Ala Ser Ala Asn Ser Cys Phe Asn Pro
420 425 430

Phe Leu Tyr Ala Leu Leu Gly Lys Asp Phe Arg Lys Lys Ala Arg Gln
435 440 445

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

Ser Thr His Cys Pro Ser Asn Asn Val Ile Ser Glu Arg Asn Ser Thr
465 470 475 480

Thr Val

<210> 9

<211> 350

<212> PRT

<213> Homo sapiens

<400> 9

Met Glu Thr Asn Ser Ser Leu Pro Thr Asn Ile Ser Gly Gly Thr Pro
1 5 10 15

Ala Val Ser Ala Gly Tyr Leu Phe Leu Asp Ile Ile Thr Tyr Leu Val
20 25 30

Phe Ala Val Thr Phe Val Leu Gly Val Leu Gly Asn Gly Leu Val Ile
35 40 45

Trp Val Ala Gly Phe Arg Met Thr His Thr Val Thr Thr Ile Ser Tyr
50 55 60

Leu Asn Leu Ala Val Ala Asp Phe Cys Phe Thr Ser Thr Leu Pro Phe
65 70 75 80

Phe Met Val Arg Lys Ala Met Gly Gly His Trp Pro Phe Gly Trp Phe
85 90 95

Leu Cys Lys Phe Leu Phe Thr Ile Val Asp Ile Asn Leu Phe Gly Ser
100 105 110

Val Phe Leu Ile Ala Leu Ile Ala Leu Asp Arg Cys Val Cys Val Leu
115 120 125

His Pro Val Trp Thr Gln Asn His Arg Thr Val Ser Leu Ala Lys Lys
130 135 140

Val Ile Ile Gly Pro Trp Val Met Ala Leu Leu Leu Thr Leu Pro Val
145 150 155 160

Ile Ile Arg Val Thr Thr Val Pro Gly Lys Thr Gly Thr Val Ala Cys
165 170 175

Thr Phe Asn Phe Ser Pro Trp Thr Asn Asp Pro Lys Glu Arg Ile Asn
180 185 190

Val Ala Val Ala Met Leu Thr Val Arg Gly Ile Ile Arg Phe Ile Ile
195 200 205

Gly Phe Ser Ala Pro Met Ser Ile Val Ala Val Ser Tyr Gly Leu Ile
210 215 220

Ala Thr Lys Ile His Lys Gln Gly Leu Ile Lys Ser Ser Pro Pro Leu
225 230 235 240

Arg Val Leu Ser Phe Val Ala Ala Ala Phe Phe Leu Cys Trp Ser Pro
245 250 255

Tyr Gln Val Val Ala Leu Ile Ala Thr Val Arg Ile Arg Glu Leu Leu
260 265 270

Gln Gly Met Tyr Lys Glu Ile Gly Ile Ala Val Asp Val Thr Ser Ala

275

280

285

Leu Ala Phe Phe Asn Ser Cys Leu Asn Pro Met Leu Tyr Val Phe Met
 290 295 300

Gly Gln Asp Phe Arg Glu Arg Leu Ile His Ala Leu Pro Ala Ser Leu
 305 310 315 320

Glu Arg Ala Leu Thr Glu Asp Ser Thr Gln Thr Ser Asp Thr Ala Thr
 325 330 335

Asn Ser Thr Leu Pro Ser Ala Glu Val Ala Leu Gln Ala Lys
 340 345 350

<210> 10

<211> 373

<212> PRT

<213> Homo sapiens

<400> 10

Met Arg Met Glu Asp Glu Asp Tyr Asn Thr Ser Ile Ser Tyr Gly Asp
 1 5 10 15

Glu Tyr Pro Asp Tyr Leu Asp Ser Ile Val Val Leu Glu Asp Leu Ser
 20 25 30

Pro Leu Glu Ala Arg Val Thr Arg Ile Phe Leu Val Val Val Tyr Ser
 35 40 45

Ile Val Cys Phe Leu Gly Ile Leu Gly Asn Gly Leu Val Ile Ile Ile
 50 55 60

Ala Thr Phe Lys Met Lys Lys Thr Val Asn Met Val Trp Phe Leu Asn
 65 70 75 80

Leu Ala Val Ala Asp Phe Leu Phe Asn Val Phe Leu Pro Ile His Ile
 85 90 95

Thr Tyr Ala Ala Met Asp Tyr His Trp Val Phe Gly Thr Ala Met Cys
 100 105 110

Lys Ile Ser Asn Phe Leu Leu Ile His Asn Met Phe Thr Ser Val Phe

115

120

125

Leu Leu Thr Ile Ile Ser Ser Asp Arg Cys Ile Ser Val Leu Leu Pro
 130 135 140

Val Trp Ser Gln Asn His Arg Ser Val Arg Leu Ala Tyr Met Ala Cys
 145 150 155 160

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

Phe Arg Asp Thr Ala Asn Leu His Gly Lys Ile Ser Cys Phe Asn Asn
 180 185 190

Phe Ser Leu Ser Thr Pro Gly Ser Ser Ser Trp Pro Thr His Ser Gln
 195 200 205

Met Asp Pro Val Gly Tyr Ser Arg His Met Val Val Thr Val Thr Arg
 210 215 220

Phe Leu Cys Gly Phe Leu Val Pro Val Leu Ile Ile Thr Ala Cys Tyr
 225 230 235 240

Leu Thr Ile Val Cys Lys Leu His Arg Asn Arg Leu Ala Lys Thr Lys
 245 250 255

Lys Pro Phe Lys Ile Ile Val Thr Ile Ile Ile Thr Phe Phe Leu Cys
 260 265 270

Trp Cys Pro Tyr His Thr Leu Asn Leu Leu Glu Leu His His Thr Ala
 275 280 285

Met Pro Gly Ser Val Phe Ser Leu Gly Leu Pro Leu Ala Thr Ala Leu
 290 295 300

Ala Ile Ala Asn Ser Cys Met Asn Pro Ile Leu Tyr Val Phe Met Gly
 305 310 315 320

Gln Asp Phe Lys Lys Phe Lys Val Ala Leu Phe Ser Arg Leu Val Asn
 325 330 335

Ala Leu Ser Glu Asp Thr Gly His Ser Ser Tyr Pro Ser His Arg Ser
340 345 350

Phe Thr Lys Met Ser Ser Met Asn Glu Arg Thr Ser Met Asn Glu Arg
355 360 365

Glu Thr Gly Met Leu
370

<210> 11
<211> 216
<212> PRT
<213> Homo sapiens

<400> 11
Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
1 5 10 15

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
20 25 30

Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val
35 40 45

Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
50 55 60

Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
65 70 75 80

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala
85 90 95

Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro
100 105 110

Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr
115 120 125

Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
130 135 140

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

Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
165 170 175

Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
180 185 190

Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
195 200 205

Ser Leu Ser Leu Ser Pro Gly Lys
210 215

<210> 12
<211> 31
<212> PRT
<213> Homo sapiens

<400> 12
Met Asp Ser Phe Asn Tyr Thr Thr Pro Asp Tyr Gly His Tyr Asp Asp
1 5 10 15

Lys Asp Thr Leu Asp Leu Asn Thr Pro Val Asp Lys Thr Ser Asn
20 25 30

<210> 13
<211> 37
<212> PRT
<213> Homo sapiens

<400> 13
Met Asp Ser Phe Asn Tyr Thr Thr Pro Asp Tyr Gly His Tyr Asp Asp
1 5 10 15

Lys Asp Thr Leu Asp Leu Asn Thr Pro Val Asp Lys Thr Ser Asn Thr
20 25 30

Leu Arg Val Pro Asp
35

<210> 14

<211> 37
<212> PRT
<213> *Macaca fascicularis*

<400> 14
Met Asp Pro Phe Ser Ser Thr Thr Leu Asp Tyr Glu His Tyr Asp Gly
1 5 10 15

Lys Asn Val Leu Asp Ser Asp Thr Pro Val Asp Lys Thr Ser Asn Thr
20 25 30

Leu Arg Val Pro Asp
35

<210> 15
<211> 398
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 15
Ala Glu Ser His Leu Ser Leu Leu Tyr His Leu Thr Ala Val Ser Ser
1 5 10 15

Pro Ala Pro Gly Thr Pro Ala Phe Trp Val Ser Gly Trp Leu Gly Pro
20 25 30

Gln Gln Tyr Leu Ser Tyr Asn Ser Leu Arg Gly Glu Ala Glu Pro Cys
35 40 45

Gly Ala Trp Val Trp Glu Asn Gln Val Ser Trp Tyr Trp Glu Lys Glu
50 55 60

Thr Thr Asp Leu Arg Ile Lys Glu Lys Leu Phe Leu Glu Ala Phe Lys
65 70 75 80

Ala Leu Gly Gly Lys Gly Pro Tyr Thr Leu Gln Gly Leu Leu Gly Cys
85 90 95

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

Asn Gly Glu Glu Phe Met Asn Phe Asp Leu Lys Gln Gly Thr Trp Gly
115 120 125

Gly Asp Trp Pro Glu Ala Leu Ala Ile Ser Gln Arg Trp Gln Gln Gln
130 135 140

Asp Lys Ala Ala Asn Lys Glu Leu Thr Phe Leu Leu Phe Ser Cys Pro
145 150 155 160

His Arg Leu Arg Glu His Leu Glu Arg Gly Arg Gly Asn Leu Glu Trp
165 170 175

Lys Glu Pro Pro Ser Met Arg Leu Lys Ala Arg Pro Ser Ser Pro Gly
180 185 190

Phe Ser Val Leu Thr Cys Ser Ala Phe Ser Phe Tyr Pro Pro Glu Leu
195 200 205

Gln Leu Arg Phe Leu Arg Asn Gly Leu Ala Ala Gly Thr Gly Gln Gly
210 215 220

Asp Phe Gly Pro Asn Ser Asp Gly Ser Phe His Ala Ser Ser Ser Leu
225 230 235 240

Thr Val Lys Ser Gly Asp Glu His His Tyr Cys Cys Ile Val Gln His
245 250 255

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

Ser Ser Val Asn Ser Arg Gly Leu Asn Asp Ile Phe Glu Ala Gln Lys
275 280 285

Ile Glu Trp His Glu His His His His His His Ile Gln Arg Thr Pro
290 295 300

Lys Ile Gln Val Tyr Ser Arg His Pro Ala Glu Asn Gly Lys Ser Asn
305 310 315 320

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

Asp Leu Leu Lys Asn Gly Glu Arg Ile Glu Lys Val Glu His Ser Asp
340 345 350

Leu Ser Phe Ser Lys Asp Trp Ser Phe Tyr Leu Leu Tyr Tyr Thr Glu
355 360 365

Phe Thr Pro Thr Glu Lys Asp Glu Tyr Ala Cys Arg Val Asn His Val
370 375 380

Thr Leu Ser Gln Pro Lys Ile Val Lys Trp Asp Arg Asp Met
385 390 395

<210> 16
<211> 398
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 16
Ala Glu Ser His Leu Ser Leu Leu Tyr His Leu Thr Ala Val Ser Ser
1 5 10 15

Pro Ala Pro Gly Thr Pro Ala Phe Trp Val Ser Gly Trp Leu Gly Pro
20 25 30

Gln Gln Tyr Leu Ser Tyr Asp Ser Leu Arg Gly Gln Ala Glu Pro Cys
35 40 45

Gly Ala Trp Val Trp Glu Asn Gln Val Ser Trp Tyr Trp Glu Lys Glu
50 55 60

Thr Thr Asp Leu Arg Ile Lys Glu Lys Leu Phe Leu Glu Ala Phe Lys
65 70 75 80

Ala Leu Gly Gly Lys Gly Pro Tyr Thr Leu Gln Gly Leu Leu Gly Cys
85 90 95

Glu Leu Ser Pro Asp Asn Thr Ser Val Pro Thr Ala Lys Phe Ala Leu
100 105 110

Asn Gly Glu Glu Phe Met Asn Phe Asp Leu Lys Gln Gly Thr Trp Gly
115 120 125

Gly Asp Trp Pro Glu Ala Leu Ala Ile Ser Gln Arg Trp Gln Gln Gln
130 135 140

Asp Lys Ala Ala Asn Lys Glu Leu Thr Phe Leu Leu Phe Ser Cys Pro
145 150 155 160

His Arg Leu Arg Glu His Leu Glu Arg Gly Arg Gly Asn Leu Glu Trp
165 170 175

Lys Glu Pro Pro Ser Met Arg Leu Lys Ala Arg Pro Gly Asn Pro Gly
180 185 190

Phe Ser Val Leu Thr Cys Ser Ala Phe Ser Phe Tyr Pro Pro Glu Leu
195 200 205

Gln Leu Arg Phe Leu Arg Asn Gly Met Ala Ala Gly Thr Gly Gln Gly
210 215 220

Asp Phe Gly Pro Asn Ser Asp Gly Ser Phe His Ala Ser Ser Ser Leu
225 230 235 240

Thr Val Lys Ser Gly Asp Glu His His Tyr Cys Cys Ile Val Gln His
245 250 255

Ala Gly Leu Ala Gln Pro Leu Arg Val Glu Leu Glu Thr Pro Ala Lys
260 265 270

Ser Ser Val Asn Ser Arg Gly Leu Asn Asp Ile Phe Glu Ala Gln Lys
275 280 285

Ile Glu Trp His Glu His His His His His Ile Gln Arg Thr Pro
290 295 300

Lys Ile Gln Val Tyr Ser Arg His Pro Pro Glu Asn Gly Lys Pro Asn

305 310 315 320
 Phe Leu Asn Cys Tyr Val Ser Gly Phe His Pro Ser Asp Ile Glu Val
 325 330 335
 Asp Leu Leu Lys Asn Gly Glu Lys Met Gly Lys Val Glu His Ser Asp
 340 345 350
 Leu Ser Phe Ser Lys Asp Trp Ser Phe Tyr Leu Leu Tyr Tyr Thr Glu
 355 360 365
 Phe Thr Pro Asn Glu Lys Asp Glu Tyr Ala Cys Arg Val Asn His Val
 370 375 380
 Thr Leu Ser Gly Pro Arg Thr Val Lys Trp Asp Arg Asp Met
 385 390 395

 <210> 17
 <211> 400
 <212> PRT
 <213> Artificial Sequence

 <220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic
 polypeptide"

 <400> 17
 Ser Glu Thr Arg Pro Pro Leu Met Tyr His Leu Thr Ala Val Ser Asn
 1 5 10 15

 Pro Ser Thr Gly Leu Pro Ser Phe Trp Ala Thr Gly Trp Leu Gly Pro
 20 25 30

 Gln Gln Tyr Leu Thr Tyr Asn Ser Leu Arg Gln Glu Ala Asp Pro Cys
 35 40 45

 Gly Ala Trp Met Trp Glu Asn Gln Val Ser Trp Tyr Trp Glu Lys Glu
 50 55 60

 Thr Thr Asp Leu Lys Ser Lys Glu Gln Leu Phe Leu Glu Ala Leu Lys
 65 70 75 80

Thr Leu Glu Lys Ile Leu Asn Gly Thr Tyr Thr Leu Gln Gly Leu Leu
85 90 95

Gly Cys Glu Leu Ala Ser Asp Asn Ser Ser Val Pro Thr Ala Val Phe
100 105 110

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

Trp Thr Gly Glu Trp Pro Glu Thr Glu Ile Val Ala Asn Leu Trp Met
130 135 140

Lys Gln Pro Asp Ala Ala Arg Lys Glu Ser Glu Phe Leu Leu Asn Ser
145 150 155 160

Cys Pro Glu Arg Leu Leu Gly His Leu Glu Arg Gly Arg Arg Asn Leu
165 170 175

Glu Trp Lys Glu Pro Pro Ser Met Arg Leu Lys Ala Arg Pro Gly Asn
180 185 190

Ser Gly Ser Ser Val Leu Thr Cys Ala Ala Phe Ser Phe Tyr Pro Pro
195 200 205

Glu Leu Lys Phe Arg Phe Leu Arg Asn Gly Leu Ala Ser Gly Ser Gly
210 215 220

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

Leu Leu Glu Val Lys Arg Gly Asp Glu His His Tyr Gln Cys Gln Val
245 250 255

Glu His Glu Gly Leu Ala Gln Pro Leu Thr Val Asp Leu Asp Ser Ser
260 265 270

Ala Arg Ser Ser Val Asn Ser Arg Gly Leu Asn Asp Ile Phe Glu Ala
275 280 285

Gln Lys Ile Glu Trp His Glu His His His His His His Ile Gln Lys
290 295 300

Thr Pro Gln Ile Gln Val Tyr Ser Arg His Pro Pro Glu Asn Gly Lys
305 310 315 320

Pro Asn Ile Leu Asn Cys Tyr Val Thr Gln Phe His Pro Pro His Ile
325 330 335

Glu Ile Gln Met Leu Lys Asn Gly Lys Lys Ile Pro Lys Val Glu Met
340 345 350

Ser Asp Met Ser Phe Ser Lys Asp Trp Ser Phe Tyr Ile Leu Ala His
355 360 365

Thr Glu Phe Thr Pro Thr Glu Thr Asp Thr Tyr Ala Cys Arg Val Lys
370 375 380

His Asp Ser Met Ala Glu Pro Lys Thr Val Tyr Trp Asp Arg Asp Met
385 390 395 400

<210> 18

<211> 274

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 18

Gln Val Asp Thr Thr Lys Ala Val Ile Thr Leu Gln Pro Pro Trp Val
1 5 10 15

Ser Val Phe Gln Glu Glu Thr Val Thr Leu His Cys Glu Val Leu His
20 25 30

Leu Pro Gly Ser Ser Ser Thr Gln Trp Phe Leu Asn Gly Thr Ala Thr
35 40 45

Gln Thr Ser Thr Pro Ser Tyr Arg Ile Thr Ser Ala Ser Val Asn Asp
50 55 60

Ser Gly Glu Tyr Arg Cys Gln Arg Gly Leu Ser Gly Arg Ser Asp Pro

65

70

75

80

Ile Gln Leu Glu Ile His Arg Gly Trp Leu Leu Leu Gln Val Ser Ser
85 90 95

Arg Val Phe Thr Glu Gly Glu Pro Leu Ala Leu Arg Cys His Ala Trp
100 105 110

Lys Asp Lys Leu Val Tyr Asn Val Leu Tyr Tyr Arg Asn Gly Lys Ala
115 120 125

Phe Lys Phe Phe His Trp Asn Ser Asn Leu Thr Ile Leu Lys Thr Asn
130 135 140

Ile Ser His Asn Gly Thr Tyr His Cys Ser Gly Met Gly Lys His Arg
145 150 155 160

Tyr Thr Ser Ala Gly Ile Ser Val Thr Val Lys Glu Leu Phe Pro Ala
165 170 175

Pro Val Leu Asn Ala Ser Val Thr Ser Pro Leu Leu Glu Gly Asn Leu
180 185 190

Val Thr Leu Ser Cys Glu Thr Lys Leu Leu Leu Gln Arg Pro Gly Leu
195 200 205

Gln Leu Tyr Phe Ser Phe Tyr Met Gly Ser Lys Thr Leu Arg Gly Arg
210 215 220

Asn Thr Ser Ser Glu Tyr Gln Ile Leu Thr Ala Arg Arg Glu Asp Ser
225 230 235 240

Gly Leu Tyr Trp Cys Glu Ala Ala Thr Glu Asp Gly Asn Val Leu Lys
245 250 255

Arg Ser Pro Glu Leu Glu Leu Gln Val Asn Ser Arg His His His His
260 265 270

His His

<210> 19
<211> 186
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 19
Gln Ala Ala Ala Pro Pro Lys Ala Val Leu Lys Leu Glu Pro Pro Trp
1 5 10 15

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

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

Ile Pro Thr His Thr Gln Pro Ser Tyr Arg Phe Lys Ala Asn Asn Asn
50 55 60

Asp Ser Gly Glu Tyr Thr Cys Gln Thr Gly Gln Thr Ser Leu Ser Asp
65 70 75 80

Pro Val His Leu Thr Val Leu Ser Glu Trp Leu Val Leu Gln Thr Pro
85 90 95

His Leu Glu Phe Gln Glu Gly Glu Thr Ile Met Leu Arg Cys His Ser
100 105 110

Trp Lys Asp Lys Pro Leu Val Lys Val Thr Phe Phe Gln Asn Gly Lys
115 120 125

Ser Gln Lys Phe Ser His Leu Asp Pro Thr Phe Ser Ile Pro Gln Ala
130 135 140

Asn His Ser His Ser Gly Asp Tyr His Cys Thr Gly Asn Ile Gly Tyr
145 150 155 160

Thr Leu Phe Ser Ser Lys Pro Val Thr Ile Thr Val Gln Val Pro Ser
165 170 175

Val Asn Ser Arg His His His His His His
180 185

<210> 20

<211> 186

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 20

Gln Ala Ala Ala Pro Pro Lys Ala Val Leu Lys Leu Glu Pro Pro Trp
1 5 10 15

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

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

Ile Pro Thr His Thr Gln Pro Ser Tyr Arg Phe Lys Ala Asn Asn Asn
50 55 60

Asp Ser Gly Glu Tyr Thr Cys Gln Thr Gly Gln Thr Ser Leu Ser Asp
65 70 75 80

Pro Val His Leu Thr Val Leu Ser Glu Trp Leu Val Leu Gln Thr Pro
85 90 95

His Leu Glu Phe Gln Glu Gly Glu Thr Ile Met Leu Arg Cys His Ser
100 105 110

Trp Lys Asp Lys Pro Leu Val Lys Val Thr Phe Phe Gln Asn Gly Lys
115 120 125

Ser Gln Lys Phe Ser Arg Leu Asp Pro Thr Phe Ser Ile Pro Gln Ala
130 135 140

Asn His Ser His Ser Gly Asp Tyr His Cys Thr Gly Asn Ile Gly Tyr

145		150		155		160									
Thr	Leu	Phe	Ser	Ser	Lys	Pro	Val	Thr	Ile	Thr	Val	Gln	Val	Pro	Ser
				165					170					175	

Val	Asn	Ser	Arg	His	His	His	His	His	His
			180					185	

<210> 21
 <211> 187
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 21															
Gly	Met	Arg	Thr	Glu	Asp	Leu	Pro	Lys	Ala	Val	Val	Phe	Leu	Glu	Pro
1				5					10				15		

Gln	Trp	Tyr	Arg	Val	Leu	Glu	Lys	Asp	Ser	Val	Thr	Leu	Lys	Cys	Gln
			20					25					30		

Gly	Ala	Tyr	Ser	Pro	Glu	Asp	Asn	Ser	Thr	Gln	Trp	Phe	His	Asn	Glu
		35					40					45			

Ser	Leu	Ile	Ser	Ser	Gln	Ala	Ser	Ser	Tyr	Phe	Ile	Asp	Ala	Ala	Thr
	50					55					60				

Val	Asp	Asp	Ser	Gly	Glu	Tyr	Arg	Cys	Gln	Thr	Asn	Leu	Ser	Thr	Leu
65					70					75					80

Ser	Asp	Pro	Val	Gln	Leu	Glu	Val	His	Ile	Gly	Trp	Leu	Leu	Leu	Gln
			85						90					95	

Ala	Pro	Arg	Trp	Val	Phe	Lys	Glu	Glu	Asp	Pro	Ile	His	Leu	Arg	Cys
			100					105					110		

His	Ser	Trp	Lys	Asn	Thr	Ala	Leu	His	Lys	Val	Thr	Tyr	Leu	Gln	Asn
		115					120					125			

Gly Lys Gly Arg Lys Tyr Phe His His Asn Ser Asp Phe Tyr Ile Pro
130 135 140

Lys Ala Thr Leu Lys Asp Ser Gly Ser Tyr Phe Cys Arg Gly Leu Phe
145 150 155 160

Gly Ser Lys Asn Val Ser Ser Glu Thr Val Asn Ile Thr Ile Thr Gln
165 170 175

Gly Val Asn Ser Arg His His His His His His
180 185

<210> 22

<211> 187

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 22

Gly Met Arg Thr Glu Asp Leu Pro Lys Ala Val Val Phe Leu Glu Pro
1 5 10 15

Gln Trp Tyr Arg Val Leu Glu Lys Asp Ser Val Thr Leu Lys Cys Gln
20 25 30

Gly Ala Tyr Ser Pro Glu Asp Asn Ser Thr Gln Trp Phe His Asn Glu
35 40 45

Ser Leu Ile Ser Ser Gln Ala Ser Ser Tyr Phe Ile Asp Ala Ala Thr
50 55 60

Val Asp Asp Ser Gly Glu Tyr Arg Cys Gln Thr Asn Leu Ser Thr Leu
65 70 75 80

Ser Asp Pro Val Gln Leu Glu Val His Ile Gly Trp Leu Leu Leu Gln
85 90 95

Ala Pro Arg Trp Val Phe Lys Glu Glu Asp Pro Ile His Leu Arg Cys
100 105 110

His Ser Trp Lys Asn Thr Ala Leu His Lys Val Thr Tyr Leu Gln Asn
115 120 125

Gly Lys Gly Arg Lys Tyr Phe His His Asn Ser Asp Phe Tyr Ile Pro
130 135 140

Lys Ala Thr Leu Lys Asp Ser Gly Ser Tyr Phe Cys Arg Gly Leu Val
145 150 155 160

Gly Ser Lys Asn Val Ser Ser Glu Thr Val Asn Ile Thr Ile Thr Gln
165 170 175

Gly Val Asn Ser Arg His His His His His His
180 185

<210> 23

<211> 186

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 23

Thr Pro Ala Ala Pro Pro Lys Ala Val Leu Lys Leu Glu Pro Gln Trp
1 5 10 15

Ile Asn Val Leu Gln Glu Asp Ser Val Thr Leu Thr Cys Arg Gly Thr
20 25 30

His Ser Pro Glu Ser Asp Ser Ile Gln Trp Phe His Asn Gly Asn Leu
35 40 45

Ile Pro Thr His Thr Gln Pro Ser Tyr Arg Phe Lys Ala Asn Asn Asn
50 55 60

Asp Ser Gly Glu Tyr Thr Cys Gln Thr Gly Gln Thr Ser Leu Ser Asp
65 70 75 80

Pro Val His Leu Thr Val Leu Ser Glu Trp Leu Val Leu Gln Thr Pro
85 90 95

His Leu Glu Phe Gln Glu Gly Glu Thr Ile Val Leu Arg Cys His Ser
100 105 110

Trp Lys Asp Lys Pro Leu Val Lys Val Thr Phe Phe Gln Asn Gly Lys
115 120 125

Ser Lys Lys Phe Ser Arg Ser Asp Pro Asn Phe Ser Ile Pro Gln Ala
130 135 140

Asn His Ser His Ser Gly Asp Tyr His Cys Thr Gly Asn Ile Gly Tyr
145 150 155 160

Thr Leu Tyr Ser Ser Lys Pro Val Thr Ile Thr Val Gln Ala Pro Ser
165 170 175

Asp Asn Ser Arg His His His His His His
180 185

<210> 24

<211> 907

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 24

Asp Gly Ser His His His His His His Gly Thr Met Asp Ser Phe Asn
1 5 10 15

Tyr Thr Thr Pro Asp Tyr Gly His Tyr Asp Asp Lys Asp Thr Leu Asp
20 25 30

Leu Asn Thr Pro Val Asp Lys Thr Ser Asn Thr Leu Arg Val Pro Asp
35 40 45

Ile Leu Ala Leu Val Ile Phe Ala Val Val Phe Leu Val Gly Val Leu
50 55 60

Gly Asn Ala Leu Val Val Trp Val Thr Ala Phe Glu Ala Lys Arg Thr

65

70

75

80

Ile Asn Ala Ile Trp Phe Leu Asn Leu Ala Val Ala Asp Phe Leu Ser
 85 90 95

Cys Leu Ala Leu Pro Ile Leu Phe Thr Ser Ile Val Gln His His His
 100 105 110

Trp Pro Phe Gly Gly Ala Ala Cys Ser Ile Leu Pro Ser Leu Ile Leu
 115 120 125

Leu Asn Met Tyr Ala Ser Ile Leu Leu Leu Ala Thr Ile Ser Ala Asp
 130 135 140

Arg Phe Leu Leu Val Phe Lys Pro Ile Trp Cys Gln Asn Phe Arg Gly
 145 150 155 160

Ala Gly Leu Ala Trp Ile Ala Cys Ala Val Ala Trp Gly Leu Ala Leu
 165 170 175

Leu Leu Thr Ile Pro Ser Phe Leu Tyr Arg Val Val Arg Glu Glu Tyr
 180 185 190

Phe Pro Pro Lys Val Leu Cys Gly Val Asp Tyr Ser His Asp Lys Arg
 195 200 205

Arg Glu Arg Ala Val Ala Ile Val Arg Leu Val Leu Gly Phe Leu Trp
 210 215 220

Pro Leu Leu Thr Leu Thr Ile Cys Tyr Thr Phe Ile Leu Leu Arg Thr
 225 230 235 240

Trp Ser Arg Arg Ala Thr Arg Ser Thr Lys Thr Leu Lys Val Val Val
 245 250 255

Ala Val Val Ala Ser Phe Phe Ile Phe Trp Leu Pro Tyr Gln Val Thr
 260 265 270

Gly Ile Met Met Ser Phe Leu Glu Pro Ser Ser Pro Thr Phe Leu Leu
 275 280 285

Leu Lys Lys Leu Asp Ser Leu Cys Val Ser Phe Ala Tyr Ile Asn Cys
290 295 300

Cys Ile Asn Pro Ile Ile Tyr Val Val Ala Gly Gln Gly Phe Gln Gly
305 310 315 320

Arg Leu Arg Lys Ser Leu Pro Ser Leu Leu Arg Asn Val Leu Thr Glu
325 330 335

Glu Ser Val Val Arg Glu Ser Lys Ser Phe Thr Arg Ser Thr Val Asp
340 345 350

Thr Met Ala Gln Lys Thr Gln Ala Val Asp Ile Asp Tyr Lys Asp Asp
355 360 365

Asp Asp Lys Ile Glu Gly Arg Met Asp Gly Ala Arg Ala Ser Val Leu
370 375 380

Ser Gly Gly Glu Leu Asp Arg Trp Glu Lys Ile Arg Leu Arg Pro Gly
385 390 395 400

Gly Lys Lys Lys Tyr Lys Leu Lys His Ile Val Trp Ala Ser Arg Glu
405 410 415

Leu Glu Arg Phe Ala Val Asn Pro Gly Leu Leu Glu Thr Ser Glu Gly
420 425 430

Cys Arg Gln Ile Leu Gly Gln Leu Gln Pro Ser Leu Gln Thr Gly Ser
435 440 445

Glu Glu Leu Arg Ser Leu Tyr Asn Thr Val Ala Thr Leu Tyr Cys Val
450 455 460

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

Glu Glu Glu Gln Asn Lys Ser Lys Lys Lys Ala Gln Gln Ala Ala Ala
485 490 495

Asp Thr Gly His Ser Ser Gln Val Ser Gln Asn Tyr Pro Ile Val Gln

500

505

510

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

Asn Ala Trp Val Lys Val Val Glu Glu Lys Ala Phe Ser Pro Glu Val
 530 535 540

Ile Pro Met Phe Ser Ala Leu Ser Glu Gly Ala Thr Pro Gln Asp Leu
 545 550 555 560

Asn Thr Met Leu Asn Thr Val Gly Gly His Gln Ala Ala Met Gln Met
 565 570 575

Leu Lys Glu Thr Ile Asn Glu Glu Ala Ala Glu Trp Asp Arg Val His
 580 585 590

Pro Val His Ala Gly Pro Ile Ala Pro Gly Gln Met Arg Glu Pro Arg
 595 600 605

Gly Ser Asp Ile Ala Gly Thr Thr Ser Thr Leu Gln Glu Gln Ile Gly
 610 615 620

Trp Met Thr Asn Asn Pro Pro Ile Pro Val Gly Glu Ile Tyr Lys Arg
 625 630 635 640

Trp Ile Ile Leu Gly Leu Asn Lys Ile Val Arg Met Tyr Ser Pro Thr
 645 650 655

Ser Ile Leu Asp Ile Arg Gln Gly Pro Lys Glu Pro Phe Arg Asp Tyr
 660 665 670

Val Asp Arg Phe Tyr Lys Thr Leu Arg Ala Glu Gln Ala Ser Gln Glu
 675 680 685

Val Lys Asn Trp Met Thr Glu Thr Leu Leu Val Gln Asn Ala Asn Pro
 690 695 700

Asp Cys Lys Thr Ile Leu Lys Ala Leu Gly Pro Ala Ala Thr Leu Glu
 705 710 715 720

Glu Met Met Thr Ala Cys Gln Gly Val Gly Gly Pro Gly His Lys Ala
725 730 735

Arg Val Leu Ala Glu Ala Met Ser Gln Val Thr Asn Thr Ala Thr Ile
740 745 750

Met Met Gln Arg Gly Asn Phe Arg Asn Gln Arg Lys Met Val Lys Cys
755 760 765

Phe Asn Cys Gly Lys Glu Gly His Thr Ala Arg Asn Cys Arg Ala Pro
770 775 780

Arg Lys Lys Gly Cys Trp Lys Cys Gly Lys Glu Gly His Gln Met Lys
785 790 795 800

Asp Cys Thr Glu Arg Gln Ala Asn Phe Leu Gly Lys Ile Trp Pro Ser
805 810 815

Tyr Lys Gly Arg Pro Gly Asn Phe Leu Gln Ser Arg Pro Glu Pro Thr
820 825 830

Ala Pro Pro Phe Leu Gln Ser Arg Pro Glu Pro Thr Ala Pro Pro Glu
835 840 845

Glu Ser Phe Arg Ser Gly Val Glu Thr Thr Thr Pro Pro Gln Lys Gln
850 855 860

Glu Pro Ile Asp Lys Glu Leu Tyr Pro Leu Thr Ser Leu Arg Ser Leu
865 870 875 880

Phe Gly Asn Asp Pro Ser Ser Gln Val Asn Ser Arg Gly Leu Asn Asp
885 890 895

Ile Phe Glu Ala Gln Lys Ile Glu Trp His Glu
900 905

<210> 25

<211> 874

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 25

Asp Gly Ser His His His His His His Gly Thr Met Asn Ser Phe Asn
1 5 10 15

Tyr Thr Thr Pro Asp Tyr Gly His Tyr Asp Asp Lys Asp Thr Leu Asp
20 25 30

Leu Asn Thr Pro Val Asp Lys Thr Ser Asn Thr Leu Arg Val Pro Asp
35 40 45

Ile Leu Ala Leu Val Ile Phe Ala Val Val Phe Leu Val Gly Val Leu
50 55 60

Gly Asn Ala Leu Val Val Trp Val Thr Ala Phe Glu Ala Lys Arg Thr
65 70 75 80

Ile Asn Ala Ile Trp Phe Leu Asn Leu Ala Val Ala Asp Phe Leu Ser
85 90 95

Cys Leu Ala Leu Pro Ile Leu Phe Thr Ser Ile Val Gln His His His
100 105 110

Trp Pro Phe Gly Gly Ala Ala Cys Ser Ile Leu Pro Ser Leu Ile Leu
115 120 125

Leu Asn Met Tyr Ala Ser Ile Leu Leu Leu Ala Thr Ile Ser Ala Asp
130 135 140

Arg Phe Leu Leu Val Phe Lys Pro Ile Trp Cys Gln Asn Phe Arg Gly
145 150 155 160

Ala Gly Leu Ala Trp Ile Ala Cys Ala Val Ala Trp Gly Leu Ala Leu
165 170 175

Leu Leu Thr Ile Pro Ser Phe Leu Tyr Arg Val Val Arg Glu Glu Tyr
180 185 190

Phe Pro Pro Lys Val Leu Cys Gly Val Asp Tyr Ser His Asp Lys Arg
195 200 205

Arg Glu Arg Ala Val Ala Ile Val Arg Leu Val Leu Gly Phe Leu Trp
210 215 220

Pro Leu Leu Thr Leu Thr Ile Cys Tyr Thr Phe Ile Leu Leu Arg Thr
225 230 235 240

Trp Ser Arg Arg Ala Thr Arg Ser Thr Lys Thr Leu Lys Val Val Val
245 250 255

Ala Val Val Ala Ser Phe Phe Ile Phe Trp Leu Pro Tyr Gln Val Thr
260 265 270

Gly Ile Met Met Ser Phe Leu Glu Pro Ser Ser Pro Thr Phe Leu Leu
275 280 285

Leu Asn Lys Leu Asp Ser Leu Cys Val Ser Phe Ala Tyr Ile Asn Cys
290 295 300

Cys Ile Asn Pro Ile Ile Tyr Val Val Ala Gly Gln Gly Phe Gln Gly
305 310 315 320

Arg Leu Arg Lys Ser Leu Pro Ser Leu Leu Arg Asn Val Leu Thr Glu
325 330 335

Glu Ser Val Val Arg Glu Ser Lys Ser Phe Thr Arg Ser Thr Val Asp
340 345 350

Thr Met Ala Gln Lys Thr Gln Ala Val Asp Ile Gly Ala Arg Ala Ser
355 360 365

Val Leu Ser Gly Gly Glu Leu Asp Arg Trp Glu Lys Ile Arg Leu Arg
370 375 380

Pro Gly Gly Lys Lys Lys Tyr Lys Leu Lys His Ile Val Trp Ala Ser
385 390 395 400

Arg Glu Leu Glu Arg Phe Ala Val Asn Pro Gly Leu Leu Glu Thr Ser
405 410 415

Glu Gly Cys Arg Gln Ile Leu Gly Gln Leu Gln Pro Ser Leu Gln Thr
420 425 430

Gly Ser Glu Glu Leu Arg Ser Leu Tyr Asn Thr Val Ala Thr Leu Tyr
435 440 445

Cys Val His Gln Arg Ile Glu Ile Lys Asp Thr Lys Glu Ala Leu Asp
450 455 460

Lys Ile Glu Glu Glu Gln Asn Lys Ser Lys Lys Lys Ala Gln Gln Ala
465 470 475 480

Ala Ala Asp Thr Gly His Ser Ser Gln Val Ser Gln Asn Tyr Pro Ile
485 490 495

Val Gln Asn Ile Gln Gly Gln Met Val His Gln Ala Ile Ser Pro Arg
500 505 510

Thr Leu Asn Ala Trp Val Lys Val Val Glu Glu Lys Ala Phe Ser Pro
515 520 525

Glu Val Ile Pro Met Phe Ser Ala Leu Ser Glu Gly Ala Thr Pro Gln
530 535 540

Asp Leu Asn Thr Met Leu Asn Thr Val Gly Gly His Gln Ala Ala Met
545 550 555 560

Gln Met Leu Lys Glu Thr Ile Asn Glu Glu Ala Ala Glu Trp Asp Arg
565 570 575

Val His Pro Val His Ala Gly Pro Ile Ala Pro Gly Gln Met Arg Glu
580 585 590

Pro Arg Gly Ser Asp Ile Ala Gly Thr Thr Ser Thr Leu Gln Glu Gln
595 600 605

Ile Gly Trp Met Thr Asn Asn Pro Pro Ile Pro Val Gly Glu Ile Tyr
610 615 620

Lys Arg Trp Ile Ile Leu Gly Leu Asn Lys Ile Val Arg Met Tyr Ser
625 630 635 640

Pro Thr Ser Ile Leu Asp Ile Arg Gln Gly Pro Lys Glu Pro Phe Arg
645 650 655

Asp Tyr Val Asp Arg Phe Tyr Lys Thr Leu Arg Ala Glu Gln Ala Ser
660 665 670

Gln Glu Val Lys Asn Trp Met Thr Glu Thr Leu Leu Val Gln Asn Ala
675 680 685

Asn Pro Asp Cys Lys Thr Ile Leu Lys Ala Leu Gly Pro Ala Ala Thr
690 695 700

Leu Glu Glu Met Met Thr Ala Cys Gln Gly Val Gly Gly Pro Gly His
705 710 715 720

Lys Ala Arg Val Leu Ala Glu Ala Met Ser Gln Val Thr Asn Thr Ala
725 730 735

Thr Ile Met Met Gln Arg Gly Asn Phe Arg Asn Gln Arg Lys Met Val
740 745 750

Lys Cys Phe Asn Cys Gly Lys Glu Gly His Thr Ala Arg Asn Cys Arg
755 760 765

Ala Pro Arg Lys Lys Gly Cys Trp Lys Cys Gly Lys Glu Gly His Gln
770 775 780

Met Lys Asp Cys Thr Glu Arg Gln Ala Asn Phe Leu Gly Lys Ile Trp
785 790 795 800

Pro Ser Tyr Lys Gly Arg Pro Gly Asn Phe Leu Gln Ser Arg Pro Glu
805 810 815

Pro Thr Ala Pro Pro Phe Leu Gln Ser Arg Pro Glu Pro Thr Ala Pro
820 825 830

Pro Glu Glu Ser Phe Arg Ser Gly Val Glu Thr Thr Thr Pro Pro Gln
835 840 845

Lys Gln Glu Pro Ile Asp Lys Glu Leu Tyr Pro Leu Thr Ser Leu Arg
850 855 860

Ser Leu Phe Gly Asn Asp Pro Ser Ser Gln
865 870

<210> 26
<211> 908
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 26
Asp Gly Ser His His His His His His Gly Thr Met Asp Pro Ile Asp
1 5 10 15

Asn Ser Ser Phe Glu Ile Asn Tyr Asp His Tyr Gly Thr Met Ala Pro
20 25 30

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

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

Gly Asn Ala Leu Val Val Trp Val Thr Ala Phe Glu Ala Arg Arg Ala
65 70 75 80

Val Asn Ala Ile Trp Phe Leu Asn Leu Ala Val Ala Asp Leu Leu Ser
85 90 95

Cys Leu Ala Leu Pro Val Leu Phe Thr Thr Val Leu Asn His Asn Tyr
100 105 110

Trp Tyr Phe Asp Ala Thr Ala Cys Ile Val Leu Pro Ser Leu Ile Leu
115 120 125

Leu Asn Met Tyr Ala Ser Ile Leu Leu Leu Ala Thr Ile Ser Ala Asp

130

135

140

Arg Phe Leu Leu Val Phe Lys Pro Ile Trp Cys Gln Lys Val Arg Gly
 145 150 155 160

Thr Gly Leu Ala Trp Met Ala Cys Gly Val Ala Trp Val Leu Ala Leu
 165 170 175

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

Tyr Ser Glu His Thr Val Cys Gly Ile Asn Tyr Gly Gly Gly Ser Phe
 195 200 205

Pro Lys Glu Lys Ala Val Ala Ile Leu Arg Leu Met Val Gly Phe Val
 210 215 220

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

Thr Trp Ser Arg Lys Ala Thr Arg Ser Thr Lys Thr Leu Lys Val Val
 245 250 255

Met Ala Val Val Ile Cys Phe Phe Ile Phe Trp Leu Pro Tyr Gln Val
 260 265 270

Thr Gly Val Met Ile Ala Trp Leu Pro Pro Ser Ser Pro Thr Leu Lys
 275 280 285

Arg Val Glu Lys Leu Asn Ser Leu Cys Val Ser Leu Ala Tyr Ile Asn
 290 295 300

Cys Cys Val Asn Pro Ile Ile Tyr Val Met Ala Gly Gln Gly Phe His
 305 310 315 320

Gly Arg Leu Leu Arg Ser Leu Pro Ser Ile Ile Arg Asn Ala Leu Ser
 325 330 335

Glu Asp Ser Val Gly Arg Asp Ser Lys Thr Phe Thr Pro Ser Thr Thr
 340 345 350

Asp Thr Ser Thr Arg Lys Ser Gln Ala Val Asp Ile Asp Tyr Lys Asp
355 360 365

Asp Asp Asp Lys Ile Glu Gly Arg Met Asp Gly Ala Arg Ala Ser Val
370 375 380

Leu Ser Gly Gly Glu Leu Asp Arg Trp Glu Lys Ile Arg Leu Arg Pro
385 390 395 400

Gly Gly Lys Lys Lys Tyr Lys Leu Lys His Ile Val Trp Ala Ser Arg
405 410 415

Glu Leu Glu Arg Phe Ala Val Asn Pro Gly Leu Leu Glu Thr Ser Glu
420 425 430

Gly Cys Arg Gln Ile Leu Gly Gln Leu Gln Pro Ser Leu Gln Thr Gly
435 440 445

Ser Glu Glu Leu Arg Ser Leu Tyr Asn Thr Val Ala Thr Leu Tyr Cys
450 455 460

Val His Gln Arg Ile Glu Ile Lys Asp Thr Lys Glu Ala Leu Asp Lys
465 470 475 480

Ile Glu Glu Glu Gln Asn Lys Ser Lys Lys Lys Ala Gln Gln Ala Ala
485 490 495

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

Gln Asn Ile Gln Gly Gln Met Val His Gln Ala Ile Ser Pro Arg Thr
515 520 525

Leu Asn Ala Trp Val Lys Val Val Glu Glu Lys Ala Phe Ser Pro Glu
530 535 540

Val Ile Pro Met Phe Ser Ala Leu Ser Glu Gly Ala Thr Pro Gln Asp
545 550 555 560

Leu Asn Thr Met Leu Asn Thr Val Gly Gly His Gln Ala Ala Met Gln

565

570

575

Met Leu Lys Glu Thr Ile Asn Glu Glu Ala Ala Glu Trp Asp Arg Val
 580 585 590

His Pro Val His Ala Gly Pro Ile Ala Pro Gly Gln Met Arg Glu Pro
 595 600 605

Arg Gly Ser Asp Ile Ala Gly Thr Thr Ser Thr Leu Gln Glu Gln Ile
 610 615 620

Gly Trp Met Thr Asn Asn Pro Pro Ile Pro Val Gly Glu Ile Tyr Lys
 625 630 635 640

Arg Trp Ile Ile Leu Gly Leu Asn Lys Ile Val Arg Met Tyr Ser Pro
 645 650 655

Thr Ser Ile Leu Asp Ile Arg Gln Gly Pro Lys Glu Pro Phe Arg Asp
 660 665 670

Tyr Val Asp Arg Phe Tyr Lys Thr Leu Arg Ala Glu Gln Ala Ser Gln
 675 680 685

Glu Val Lys Asn Trp Met Thr Glu Thr Leu Leu Val Gln Asn Ala Asn
 690 695 700

Pro Asp Cys Lys Thr Ile Leu Lys Ala Leu Gly Pro Ala Ala Thr Leu
 705 710 715 720

Glu Glu Met Met Thr Ala Cys Gln Gly Val Gly Gly Pro Gly His Lys
 725 730 735

Ala Arg Val Leu Ala Glu Ala Met Ser Gln Val Thr Asn Thr Ala Thr
 740 745 750

Ile Met Met Gln Arg Gly Asn Phe Arg Asn Gln Arg Lys Met Val Lys
 755 760 765

Cys Phe Asn Cys Gly Lys Glu Gly His Thr Ala Arg Asn Cys Arg Ala
 770 775 780

Pro Arg Lys Lys Gly Cys Trp Lys Cys Gly Lys Glu Gly His Gln Met
785 790 795 800

Lys Asp Cys Thr Glu Arg Gln Ala Asn Phe Leu Gly Lys Ile Trp Pro
805 810 815

Ser Tyr Lys Gly Arg Pro Gly Asn Phe Leu Gln Ser Arg Pro Glu Pro
820 825 830

Thr Ala Pro Pro Phe Leu Gln Ser Arg Pro Glu Pro Thr Ala Pro Pro
835 840 845

Glu Glu Ser Phe Arg Ser Gly Val Glu Thr Thr Thr Pro Pro Gln Lys
850 855 860

Gln Glu Pro Ile Asp Lys Glu Leu Tyr Pro Leu Thr Ser Leu Arg Ser
865 870 875 880

Leu Phe Gly Asn Asp Pro Ser Ser Gln Val Asn Ser Arg Gly Leu Asn
885 890 895

Asp Ile Phe Glu Ala Gln Lys Ile Glu Trp His Glu
900 905

<210> 27
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 27
Ser Tyr Ala Met His
1 5

<210> 28
<211> 19
<212> PRT
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 28
Arg Ile Lys Ser Lys Ala Gln Gly Gly Thr Thr Asp Tyr Ala Ala His
1 5 10 15

Val Lys Gly

<210> 29
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 29
Val Ser Phe Ser Thr Phe Asp Val
1 5

<210> 30
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 30
Gly Phe Thr Phe Ser Ser Tyr
1 5

<210> 31
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 31

Lys Ser Lys Ala Gln Gly Gly Thr
1 5

<210> 32
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 32
Ser Gly Ser Ser Ser Asn Ile Gly Ser Tyr Tyr Val Ser
1 5 10

<210> 33
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 33
Arg Asn Asn Gln Arg Pro Ser
1 5

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

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 34
Asp Ser Trp Asp His Ser Ser Met Asn Val
1 5 10

<210> 35
<211> 119
<212> PRT
<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 35

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

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

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

Gly Arg Ile Lys Ser Lys Ala Gln Gly Gly Thr Thr Asp Tyr Ala Ala
50 55 60

His Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr
65 70 75 80

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

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

Thr Leu Val Thr Val Ser Ser
115

<210> 36

<211> 111

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 36

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

Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Tyr

20

25

30

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

Ile Tyr Arg Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
 50 55 60

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Thr Gly Leu Gln
 65 70 75 80

Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Asp Ser Trp Asp His Ser Ser
 85 90 95

Met Asn Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln
 100 105 110

<210> 37

<211> 449

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
 polypeptide"

<400> 37

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

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

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

Gly Arg Ile Lys Ser Lys Ala Gln Gly Gly Thr Thr Asp Tyr Ala Ala
 50 55 60

His Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr
 65 70 75 80

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

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

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

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

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

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

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

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

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

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Glu Gly Ala Pro
225 230 235 240

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
245 250 255

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
260 265 270

Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
275 280 285

Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
290 295 300

Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
305 310 315 320

Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ser Ser Ile Glu Lys
325 330 335

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

Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr
355 360 365

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
370 375 380

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
385 390 395 400

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
405 410 415

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
420 425 430

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
435 440 445

Lys

<210> 38

<211> 215

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 38

Gln Ser Val Leu Thr Gln Pro Pro Ser Val Ser Gly Ala Pro Gly Gln

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

<210> 39
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 39
Arg Ile Lys Ser Val Ala Gln Gly Gly Thr Thr Asp Tyr Ala Ala His
1 5 10 15

Val Lys Gly

<210> 40
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 40
Val Ser His Ser Thr Phe Asp Val
1 5

<210> 41
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 41
Lys Ser Val Ala Gln Gly Gly Thr
1 5

<210> 42
<211> 119
<212> PRT
<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 42

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

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

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

Gly Arg Ile Lys Ser Val Ala Gln Gly Gly Thr Thr Asp Tyr Ala Ala
50 55 60

His Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr
65 70 75 80

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

Tyr Cys Ala Arg Val Ser His Ser Thr Phe Asp Val Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser
115

<210> 43

<211> 111

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 43

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

Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Tyr
20 25 30

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

Ile Tyr Arg Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
50 55 60

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Thr Gly Leu Gln
65 70 75 80

Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Asp Ser Trp Asp His Ser Ser
85 90 95

Met Asn Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln
100 105 110

<210> 44

<211> 449

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 44

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

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

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

Gly Arg Ile Lys Ser Val Ala Gln Gly Gly Thr Thr Asp Tyr Ala Ala
50 55 60

His Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr
65 70 75 80

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

Tyr Cys Ala Arg Val Ser His Ser Thr Phe Asp Val Trp Gly Gln Gly
100 105 110

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

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

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

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

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

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

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

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Glu Gly Ala Pro
225 230 235 240

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
245 250 255

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
260 265 270

Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
275 280 285

Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val

290

295

300

Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
 305 310 315 320

Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ser Ser Ile Glu Lys
 325 330 335

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

Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr
 355 360 365

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
 370 375 380

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
 385 390 395 400

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
 405 410 415

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
 420 425 430

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
 435 440 445

Lys

<210> 45

<211> 215

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
 polypeptide"

<400> 45

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

Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Tyr
20 25 30

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

Ile Tyr Arg Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
50 55 60

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Thr Gly Leu Gln
65 70 75 80

Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Asp Ser Trp Asp His Ser Ser
85 90 95

Met Asn Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro
100 105 110

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

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

Gly Ala Val Thr Val Ala Trp Lys Ala Asp Ser Ser Pro Val Lys Ala
145 150 155 160

Gly Val Glu Thr Thr Thr Pro Ser Lys Gln Ser Asn Asn Lys Tyr Ala
165 170 175

Ala Ser Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His Arg
180 185 190

Ser Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val Glu Lys Thr
195 200 205

Val Ala Pro Thr Glu Cys Ser
210 215

<210> 46
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
oligonucleotide"

<400> 46
agctatgcga tgcac 15

<210> 47
<211> 57
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
oligonucleotide"

<400> 47
cgtatcaaat ccaaagccca gggcggtagc accgactacg cggcgcacgt gaaaggc 57

<210> 48
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
oligonucleotide"

<400> 48
gtttctttct ccactttcga tggt 24

<210> 49
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
oligonucleotide"

<400> 49
ggatttacct tcagcagcta t 21

<210> 50
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
oligonucleotide"

<400> 50
aaatccaaag cccagggcgg tacg 24

<210> 51
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
oligonucleotide"

<400> 51
agcggcagct cctccaatat tggtagctat tacgtgagc 39

<210> 52
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
oligonucleotide"

<400> 52
cgtaataatc aacgtcctag c 21

<210> 53
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

oligonucleotide"

<400> 53

gacagctggg atcacagctc catgaatgtt

30

<210> 54

<211> 357

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 54

gaggtgcaat tgggtggaaag cggcgggtggc ctgggtgaaac caggcggcag cctgcgcttg 60

agctgcgccg cctccggatt taccttcagc agctatgcga tgcactgggt gcgccaggcc 120

ccgggcaaag gtctcgaatg ggtgggtcgt atcaaatcca aagcccaggg cggtacgacc 180

gactacgcgg cgcacgtgaa aggccgcttt accattagcc gcgatgattc gaaaaacacc 240

ctgtatctgc aaatgaacag cctgaaaacc gaagatacgg ccgtgtatta ttgcgcgcgt 300

gtttctttct ccactttcga tgtttggggc caaggcacc tggtgactgt ctcgagc 357

<210> 55

<211> 333

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 55

cagagcgtgc tgaccagcc tcctagcgtg agcgggtgcac cgggccagcg cgtgaccatt 60

agctgtagcg gcagctcctc caatattgggt agctattacg tgagctggta tcagcagctg 120

ccgggcacgg cgccgaaagt tctgatctat cgtaataatc aacgtcctag cggcgtgccg 180

gatcgcttta gcggatccaa aagcggcacc agcggcagcc tggcgattac cggcctgcaa 240

gcagaagatg aagcggatta ttactgcgac agctgggatc acagctccat gaatgttttt 300

ggcggcggta ccaagctgac cgtgctgggc cag 333

<210> 56
<211> 1347
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 56
gaggtgcaat tgggtggaaag cggcggtggc ctggtgaaac caggcggcag cctgcgctg 60
agctgcgccg cctccggatt taccttcagc agctatgcga tgcactgggt gcgccaggcc 120
ccgggcaaag gtctcgaatg ggtgggtcgt atcaaattca aagcccaggg cggtagcacc 180
gactacgcgg cgcacgtgaa aggccgcttt accattagcc gcgatgattc gaaaaacacc 240
ctgtatctgc aaatgaacag cctgaaaacc gaagatacgg ccgtgtatta ttgcgcgctg 300
gtttctttct ccactttcga tgtttggggc caaggcacc tggtgactgt ctcgagcgcg 360
tcgaccaaag gccccagcgt gttccctctg gccccagca gcaagagcac ctctggcgga 420
acagccgccc tgggctgcct ggtcaaggac tacttccccg agcccgtagc cgtgtcctgg 480
aactctggcg ccctgaccag cggcgtgcac acctttccag ccgtgctcca gagcagcggc 540
ctgtacagcc tgagcagcgt cgtgaccgtg cccagcagca gcctgggcac ccagacctac 600
atctgcaacg tgaaccacaa gcccagcaac acaaaggtgg acaagcgggt ggaacccaag 660
agctgcgaca agaccacac ctgtcccccc tgccctgccc ctgaagcgga gggagcccc 720
tccgtgttcc tgttcccccc aaagcctaag gacaccctga tgatcagccg gacccccgaa 780
gtgacctgcg tgggtggtgga cgtgtccac gaggaccctg aagtgaagtt taattgttac 840
gtggacggcg tggaagtgca caacccaag accaagccca gagaggaaca gtacaacagc 900
acctaccggg tgggtgtccgt gctgaccgtg ctgcaccagg actggctgaa cggcaaagag 960
tacaagtgca aggtgtccaa caaggccctg ctttctcca tcgagaaaac catcagcaag 1020
gccaaaggcc agccccgcga gccccagggtg tacacactgc cccctagccg ggaagagatg 1080
accaagaacc aggtgtccct gacctgcctc gtgaagggtt tctaccccag cgacattgcc 1140
gtggaatggg agagcaacgg ccagcccag aacaactaca agaccacccc ccctgtgctg 1200
gacagcgacg gctcattctt cctgtacagc aagctgaccg tggacaagag ccggtggcag 1260
cagggaacg tgttcagctg ctccgtgatg cacgaggccc tgcacaacca ctacaccag 1320

aagtcctga gcctgagccc cggcaag

1347

<210> 57

<211> 645

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 57

cagagcgtgc tgaccagcc tcctagcgtg agcggcgcac cgggccagcg cgtgaccatt 60

agctgtagcg gcagctcctc caatattggt agctattacg tgagctggta tcagcagctg 120

ccgggcacgg cgccgaaagt tctgatctat cgtaataatc aacgtcctag cggcgtgccg 180

gatcgcttta gcggatccaa aagcggcacc agcgccagcc tggcgattac cggcctgcaa 240

gcagaagatg aagcggatta ttactgacgac agctgggatac acagctccat gaatgttttt 300

ggcggcggta ccaagctgac cgtgctgggc cagcccaaag ccgccctag cgtgaccctg 360

ttccccccct cgagttagga actccaggcc aacaaggcca ccctcgtgtg cctgatcagc 420

gacttctacc ctggcgccgt gaccgtggcc tggaaggccg atagcagccc tgtgaaggcc 480

ggcgtggaaa ccaccacccc cagcaagcag agcaacaaca aatacgccgc cagcagctac 540

ctgagcctga ccccgagca gtggaagtcc cacagatcct acagctgcca ggtcacacac 600

gagggcagca ccgtggaaaa gaccgtggcc cccaccgagt gcagc 645

<210> 58

<211> 15

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
oligonucleotide"

<400> 58

agctatgcga tgcac 15

<210> 59

<211> 57

<212> DNA
 <213> Artificial Sequence

 <220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic
 oligonucleotide"

 <400> 59
 cgtatcaaat ccgtggccca gggcggtagc accgactacg cggcgcacgt gaaaggc 57

<210> 60
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic
 oligonucleotide"

 <400> 60
 gtttctcatt ccactttcga tggt 24

<210> 61
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic
 oligonucleotide"

 <400> 61
 ggatttacct tcagcagcta t 21

<210> 62
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic
 oligonucleotide"

 <400> 62
 aaatccgtgg cccagggcgg tacg 24

<210> 63
 <211> 39
 <212> DNA
 <213> Artificial Sequence

 <220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic
 oligonucleotide"

 <400> 63
 agcggcagct cctccaatat tggtagctat tacgtgagc 39

<210> 64
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic
 oligonucleotide"

 <400> 64
 cgtaataatc aacgtcctag c 21

<210> 65
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic
 oligonucleotide"

 <400> 65
 gacagctggg atcacagctc catgaatgtt 30

<210> 66
 <211> 357
 <212> DNA
 <213> Artificial Sequence

 <220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic
 polynucleotide"

 <400> 66
 gaggtgcaat tggtggaaag cggcgggtggc ctggtgaaac caggcggcag cctg'gcctg 60

agctgcgccg cctccggatt taccttcagc agctatgcga tgcactgggt gcgccaggcc	120
ccgggcaaag gtctcgaatg ggtgggtcgt atcaaatccg tggcccaggg cggtacgacc	180
gactacgcgg cgcacgtgaa aggccgcttt accattagcc gcgatgattc gaaaaacacc	240
ctgtatctgc aaatgaacag cctgaaaacc gaagatacgg ccgtgtatta ttgcgcgcgt	300
gtttctcatt ccactttcga tgtttggggc caaggcacc tggtgactgt ctcgagc	357

<210> 67
 <211> 333
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 67	
cagagcgtgc tgaccagcc tcctagcgtg agcggcgcac cgggccagcg cgtgaccatt	60
agctgtagcg gcagctcctc caatattggt agctattacg tgagctggta tcagcagctg	120
ccgggcacgg cgccgaaagt tctgatctat cgtaataatc aacgtcctag cggcgtgccg	180
gatcgcttta gcggatccaa aagcggcacc agcggcagcc tggcgattac cggcctgcaa	240
gcagaagatg aagcggatta ttactgcgac agctgggatc acagctccat gaatgttttt	300
ggcggcggtg ccaagctgac cgtgctgggc cag	333

<210> 68
 <211> 1347
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 68	
gaggtgcaat tggcggaaag cggcggcggc ctggcggcag cctgcgcctg	60
agctgcgccg cctccggatt taccttcagc agctatgcga tgcactgggt gcgccaggcc	120
ccgggcaaag gtctcgaatg ggtgggtcgt atcaaatccg tggcccaggg cggtacgacc	180
gactacgcgg cgcacgtgaa aggccgcttt accattagcc gcgatgattc gaaaaacacc	240

ctgtatctgc aaatgaacag cctgaaaacc gaagatacgg ccgtgtatta ttgcgcgcgt	300
gtttctcatt ccactttcga tgtttggggc caaggcacc tggtgactgt ctcgagcgcg	360
tcgaccaaag gccccagcgt gttccctctg gccccagca gcaagagcac ctctggcgga	420
acagccgccc tgggctgcct ggtcaaggac tacttccccg agcccgtgac cgtgtcctgg	480
aactctggcg ccctgaccag cggcgtgcac acctttccag ccgtgctcca gagcagcggc	540
ctgtacagcc tgagcagcgt cgtgaccgtg cccagcagca gcctgggcac ccagacctac	600
atctgcaacg tgaaccacaa gcccagcaac acaaaggtgg acaagcgggt ggaacccaag	660
agctgcgaca agaccacac ctgtcccccc tgccctgccc ctgaagcgga gggagcccc	720
tccgtgttcc tgttcccccc aaagcctaag gacaccctga tgatcagccg gacccccgaa	780
gtgacctgcg tgggtgggtgga cgtgtccac gaggaccctg aagtgaagtt taattggtac	840
gtggacggcg tggaagtga caacgccaag accaagccca gagaggaaca gtacaacagc	900
acctaccggg tgggtgtccgt gctgaccgtg ctgcaccagg actggctgaa cggcaaagag	960
tacaagtga aggtgtccaa caaggccctg ccttcctcca tcgagaaaac catcagcaag	1020
gccaaaggcc agccccgca gccccagggtg tacacactgc cccctagccg ggaagagatg	1080
accaagaacc aggtgtccct gacctgcctc gtgaagggt tctacccag cgacattgcc	1140
gtggaatggg agagcaacgg ccagcccag aacaactaca agaccacccc ccctgtgctg	1200
gacagcgacg gctcattctt cctgtacagc aagctgaccg tggacaagag ccggtggcag	1260
cagggcaacg tgttcagctg ctccgtgatg cacgaggccc tgcacaacca ctacaccag	1320
aagtcctga gcctgagccc cggcaag	1347

<210> 69

<211> 645

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 69

cagagcgtgc tgaccagcc tcctagcgtg agcggcgcac cgggccagcg cgtgaccatt	60
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agctgtagcg gcagctcctc caatattggt agctattacg tgagctggta tcagcagctg	120
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ccgggcacgg cgccgaaagt tctgatctat cgtaataatc aacgtcctag cggcgtgccg	180
gatcgccttta gcggatccaa aagcggcacc agcgccagcc tggcgattac cggcctgcaa	240
gcagaagatg aagcggatta ttactgcgac agctgggatc acagctccat gaatgttttt	300
ggcggcggtta ccaagctgac cgtgctgggc cagcccaaag ccgcccctag cgtgaccctg	360
ttccccccct cgagtgagga actccaggcc aacaaggcca ccctcgtgtg cctgatcagc	420
gacttctacc ctggcgccgt gaccgtggcc tggaaggccg atagcagccc tgtgaaggcc	480
ggcgtggaaa ccaccacccc cagcaagcag agcaacaaca aatacgccgc cagcagctac	540
ctgagcctga ccccgagca gtggaagtcc cacagatcct acagctgcca ggtcacacac	600
gagggcagca ccgtggaaaa gaccgtggcc cccaccgagt gcagc	645

<210> 70
 <211> 15
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic
 oligonucleotide"

<400> 70	
agctacgcta tgcac	15

<210> 71
 <211> 57
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic
 oligonucleotide"

<400> 71	
cggatcaaga gcaaggctca aggcggcacc accgattacg ccgctcatgt gaagggc	57

<210> 72
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>

<221> source
 <223> /note="Description of Artificial Sequence: Synthetic
 oligonucleotide"

<400> 72
 gtgtccttct ccaccttcga tgtg 24

<210> 73
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic
 oligonucleotide"

<400> 73
 ggcttcacct tctccagcta c 21

<210> 74
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic
 oligonucleotide"

<400> 74
 aagagcaagg ctcaaggcgg cacc 24

<210> 75
 <211> 39
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic
 oligonucleotide"

<400> 75
 tccggctcct cctccaacat cggctcctac tacgtgtcc 39

<210> 76
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic
 oligonucleotide"

<400> 76
 cggaacaacc agcggccttc t 21

<210> 77
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic
 oligonucleotide"

<400> 77
 gactcttggg accactcctc catgaacgtg 30

<210> 78
 <211> 357
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic
 polynucleotide"

<400> 78
 gaagtgcagc tgggtggaatc tggcggcgga cttgtgaaac ctggcggctc tctgagactg 60
 tcttgtgccg cttccggctt caccttctcc agctacgcta tgcactgggt ccgacaggcc 120
 cctggcaaag gattggagtg ggtcggacgg atcaagagca aggctcaagg cggcaccacc 180
 gattacgccg ctcatgtgaa gggcagattc accatctctc gggacgactc caagaacacc 240
 ctgtacctgc agatgaactc cctgaaaacc gaggacaccg ccgtgtacta ctgcgccaga 300
 gtgtccttct ccaccttcga tgtgtggggc cagggcacac tggttacagt ctcgagc 357

<210> 79
 <211> 333
 <212> DNA
 <213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 79
cagtccgtgc tgaccagcc tccttctgtt tctggtgctc ctggccagag agtgaccatc 60
tcttgctccg gtcctcctc caacatcggc tcctactacg tgtcctggta tcagcagctg 120
cctggcaccg ctctaaggt gctgatctac cggaacaacc agcggccttc tggcgtgccc 180
gatagattct ccggctctaa gtctggcacc tctgccagcc tggctatcac tggactgcag 240
gctgaggacg aggccgacta ctactgcgac tcttgggacc actcctccat gaacgtgttc 300
ggcggaggta ccaagctgac cgtgctggga cag 333

<210> 80
<211> 1347
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 80
gaagtgcagc tggtggaatc tggcggcgga cttgtgaaac ctggcggctc tctgagactg 60
tcttgtgccg cttccggctt caccttctcc agctacgcta tgcactgggt ccgacaggcc 120
cctggcaaag gattggagtg ggtcggacgg atcaagagca aggctcaagg cggcaccacc 180
gattacgccg ctcatgtgaa gggcagattc accatctctc gggacgactc caagaacacc 240
ctgtacctgc agatgaactc cctgaaaacc gaggacaccg ccgtgtacta ctgcgccaga 300
gtgtccttct ccaccttcga tgtgtggggc cagggcacac tggttacagt ctcgagcgcc 360
tccaccaaag gaccctctgt gtttcctctg gtcctctca gcaagtctac ctctggtgga 420
acagctgccc tgggctgcct ggtcaaggat tactttcctg agcctgtgac cgtgtcctgg 480
aactctggcg ctctgacatc tggcgtgcac acctttccag ctgtgctgca gtcctctggc 540
ctgtacagcc tgtcctctgt cgtgaccgtg ctttctagct ctctgggcac ccagacctac 600
atctgcaatg tgaaccacaa gccttccaac accaaggtgg acaagagagt ggaacccaag 660
tcctgcgaca agaccacac ctgtcctcca tgtcctgctc cagaagctga gggcgctcct 720
tccgtgttcc tgtttcctcc aaagcctaag gacaccctga tgatctctcg gaccctgaa 780

gtgacctg	cg	tggtggtgga	tgtgtctcac	gaggaccag	aagtgaagtt	caattggtac	840
gtggacggcg	tggaagtgc	caacgccaag	accaagccta	gagaggaaca	gtacaactcc		900
acctacagag	tggtgtccgt	gctgaccgtg	ctgcaccagg	attggctgaa	cggcaaagag		960
tacaagtgc	aggtgtccaa	caaggccctg	ccttcagca	tcgaaaagac	catctccaag		1020
gccaagggcc	agcctagga	acccaggtt	tacaccctgc	ctccaagccg	ggaagagatg		1080
accaagaacc	aggtgtccct	gacctgcctc	gtgaagggt	tctacccttc	cgatatcgcc		1140
gtggaatggg	agagcaatgg	ccagcctgag	aacaactaca	agacaacccc	tcctgtgctg		1200
gactccgacg	gctcattctt	cctgtactcc	aagctgacag	tgacaagtc	cagatggcag		1260
cagggcaacg	tgttctcctg	ctccgtgatg	cacgaggccc	tgacacatca	ctacacacag		1320
aagtcctgt	ctctgtcccc	tggaag					1347

<210> 81

<211> 645

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 81

cagtccgtgc	tgaccagcc	tccttctgtt	tctggtgctc	ctggccagag	agtgaccatc	60
tcttgctccg	gctcctcctc	caacatcggc	tcctactacg	tgtcctggta	tcagcagctg	120
cctggcaccg	ctcctaaggt	gctgatctac	cggaacaacc	agcggccttc	tggcgtgccc	180
gatagattct	ccggctctaa	gtctggcacc	tctgccagcc	tggtatcac	tggaactgcag	240
gctgaggacg	aggccgacta	ctactgacg	tcttgggacc	actcctccat	gaacgtgttc	300
ggcggaggta	ccaagctgac	cgtgctggga	cagcctaagg	ctgccccttc	cgtgacactg	360
ttccctccat	cctctgagga	actgcaggcc	aacaaggcta	ccctcgtgtg	cctgatctcc	420
gacttttacc	ctggcgctgt	gaccgtggcc	tggaaggctg	atagttctcc	tgtgaaggcc	480
ggcgtggaaa	ccaccacacc	ttccaagcag	tccaacaaca	aatacgccgc	ctcctctac	540
ctgtctctga	cccctgaaca	gtggaagtcc	caccggtcct	acagctgcca	agtgacccat	600
gagggctcca	ccgtggaaaa	gaccgtggct	cctaccgagt	gctct		645

<210> 82
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
oligonucleotide"

<400> 82
agctacgcta tgcac

15

<210> 83
<211> 57
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
oligonucleotide"

<400> 83
cggatcaaga gcgttgccca aggcggcacc accgattacg ctgctcatgt gaagggc

57

<210> 84
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
oligonucleotide"

<400> 84
gtgtcccact ctaccttcga tgtg

24

<210> 85
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
oligonucleotide"

<400> 85
ggcttcacct tctccagcta c 21

<210> 86
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
oligonucleotide"

<400> 86
aagagcgttg cccaaggcgg cacc 24

<210> 87
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
oligonucleotide"

<400> 87
tccggctcct cctccaacat cggctcctac tacgtgtcc 39

<210> 88
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
oligonucleotide"

<400> 88
cggaacaacc agcggccttc t 21

<210> 89
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

oligonucleotide"

<400> 89

gactcttggg accactcctc catgaacgtg

30

<210> 90

<211> 357

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 90

gaagtgcagc tgggtggaatc tggcggcgga cttgtgaaac ctggcggctc tctgagactg

60

tcttgtgccg cttccggctt caccttctcc agctacgcta tgcactgggt ccgacaggcc

120

cctggcaaag gattggagtg ggtcggacgg atcaagagcg ttgcccaagg cggcaccacc

180

gattacgctg ctcatgtgaa gggcagattc accatcagcc gggacgactc caagaacacc

240

ctgtacctgc agatgaactc cctgaaaacc gaggacaccg ccgtgtacta ctgcgccaga

300

gtgtcccact ctaccttcga tgtgtggggc cagggcacac tggttacagt ctcgagc

357

<210> 91

<211> 333

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 91

cagtcctgtc tgacctcagcc tccttctgtt tctggtgctc ctggccagag agtgaccatc

60

tcttgctccg gtcctcctc caacatcggc tcctactacg tgtcctggta tcagcagctg

120

cctggcaccg ctcctaaggt gctgatctac cggaacaacc agcggccttc tggcgtgccc

180

gatagattct ccggctctaa gtctggcacc tctgccagcc tggctatcac tggactgcag

240

gctgaggacg aggccgacta ctactgcgac tcttgggacc actcctccat gaacgtgttc

300

ggcggaggta ccaagctgac cgtgctggga cag

333

<210> 92
<211> 1347
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 92
gaagtgcagc tgggtggaatc tggcggcgga cttgtgaaac ctggcggctc tctgagactg 60
tcttgtgccg cttccggctt caccttctcc agctacgcta tgcactgggt ccgacaggcc 120
cctggcaaag gattggagtg ggtcggacgg atcaagagcg ttgcccaagg cggcaccacc 180
gattacgctg ctcatgtgaa gggcagattc accatcagcc gggacgactc caagaacacc 240
ctgtacctgc agatgaactc cctgaaaacc gaggacaccg ccgtgtacta ctgcgccaga 300
gtgtcccact ctaccttcga tgtgtggggc cagggcacac tggttacagt ctcgagcgcc 360
tccaccaaag gaccctctgt gtttcctctg gtcctctca gcaagtctac ctctggtgga 420
acagctgccc tgggctgcct ggtcaaggat tactttcctg agcctgtgac cgtgtcctgg 480
aactctggcg ctctgacatc tggcgtgcac acctttccag ctgtgctgca gtcctctggc 540
ctgtacagcc tgtcctctgt cgtgaccgtg ctttctagct ctctgggcac ccagacctac 600
atctgcaatg tgaaccacaa gccttccaac accaaggtgg acaagagagt ggaacccaag 660
tcctgcgaca agaccacac ctgtcctcca tgtcctgctc cagaagctga gggcgctcct 720
tccgtgttcc tgtttcctcc aaagcctaag gacaccctga tgatctctcg gaccctgaa 780
gtgacctgcg tgggtggtgga tgtgtctcac gaggaccag aagtgaagtt caattggtac 840
gtggacggcg tggaagtgca caacccaag accaagccta gagaggaaca gtacaactcc 900
acctacagag tgggtgtccgt gctgaccgtg ctgcaccagg attggctgaa cggcaaagag 960
tacaagtgca aggtgtccaa caaggccctg ctttcagca tcgaaaagac catctccaag 1020
gccaagggcc agcctagga accccagggtt tacaccctgc ctccaagccg ggaagagatg 1080
accaagaacc aggtgtccct gacctgcctc gtgaagggtt tctacccttc cgatatcgcc 1140
gtggaatggg agagcaatgg ccagcctgag aacaactaca agacaacccc tcctgtgctg 1200
gactccgacg gctcattctt cctgtactcc aagctgacag tggacaagtc cagatggcag 1260
cagggcaacg tgttctcctg ctccgtgatg cacgaggccc tgcacaatca ctacacacag 1320

aagtcctgt ctctgtcccc tggcaag

1347

<210> 93

<211> 645

<212> DNA

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 93

cagtcctgtc tgaccagcc tccttctgtt tctggtgctc ctggccagag agtgaccatc 60

tcttgctccg gtcctcctc caacatcggc tcctactacg tgtcctggta tcagcagctg 120

cctggcaccg ctctaaggt gctgatctac cggaacaacc agcggccttc tggcgtgccc 180

gatagattct ccggctctaa gtctggcacc tctgccagcc tggctatcac tggactgcag 240

gctgaggacg aggccgacta ctactgcgac tcttgggacc actcctccat gaacgtgttc 300

ggcggaggta ccaagctgac cgtgctggga cagcctaagg ctgccccttc cgtgacactg 360

ttccctccat cctctgagga actgcaggcc aacaaggcta ccctcgtgtg cctgatctcc 420

gacttttacc ctggcgctgt gaccgtggcc tggaaggctg atagttctcc tgtgaaggcc 480

ggcgtggaaa ccaccacacc ttccaagcag tccaacaaca aatacgccgc ctctcctac 540

ctgtctctga cccctgaaca gtggaagtcc caccggctct acagctgcca agtgacccat 600

gagggctcca ccgtggaaaa gaccgtggct cctaccgagt gctct 645

<210> 94

<211> 454

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 94

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly

1

5

10

15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr

20

25

30

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

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

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

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

Arg Asp Tyr Tyr Tyr Tyr Ala Ser Gly Ser Tyr Tyr Lys Ala Phe Asp
 100 105 110

Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Ala Ser Thr Lys
 115 120 125

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

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

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

Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val
 180 185 190

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

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

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

Ala Glu Gly Ala Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
245 250 255

Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
260 265 270

Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
275 280 285

Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
290 295 300

Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
305 310 315 320

Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
325 330 335

Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
340 345 350

Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn
355 360 365

Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
370 375 380

Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
385 390 395 400

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

Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
420 425 430

Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
435 440 445

Ser Leu Ser Pro Gly Lys

450

<210> 95

<211> 214

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 95

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

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

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

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

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

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

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

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

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145 150 155 160

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

Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
180 185 190

Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
195 200 205

Phe Asn Arg Gly Glu Cys
210

<210> 96

<211> 400

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 96

Ala Glu Pro Arg Leu Pro Leu Met Tyr His Leu Ala Ala Val Ser Asp
1 5 10 15

Leu Ser Thr Gly Leu Pro Ser Phe Trp Ala Thr Gly Trp Leu Gly Ala
20 25 30

Gln Gln Tyr Leu Thr Tyr Asn Asn Leu Arg Gln Glu Ala Asp Pro Cys
35 40 45

Gly Ala Trp Ile Trp Glu Asn Gln Val Ser Trp Tyr Trp Glu Lys Glu
50 55 60

Thr Thr Asp Leu Lys Ser Lys Glu Gln Leu Phe Leu Glu Ala Ile Arg
65 70 75 80

Thr Leu Glu Asn Gln Ile Asn Gly Thr Phe Thr Leu Gln Gly Leu Leu
85 90 95

Gly Cys Glu Leu Ala Pro Asp Asn Ser Ser Leu Pro Thr Ala Val Phe
100 105 110

Ala Leu Asn Gly Glu Glu Phe Met Arg Phe Asn Pro Arg Thr Gly Asn
115 120 125

Trp Ser Gly Glu Trp Pro Glu Thr Asp Ile Val Gly Asn Leu Trp Met
130 135 140

Lys Gln Pro Glu Ala Ala Arg Lys Glu Ser Glu Phe Leu Leu Thr Ser
145 150 155 160

Cys Pro Glu Arg Leu Leu Gly His Leu Glu Arg Gly Arg Gln Asn Leu
165 170 175

Glu Trp Lys Glu Pro Pro Ser Met Arg Leu Lys Ala Arg Pro Gly Asn
180 185 190

Ser Gly Ser Ser Val Leu Thr Cys Ala Ala Phe Ser Phe Tyr Pro Pro
195 200 205

Glu Leu Lys Phe Arg Phe Leu Arg Asn Gly Leu Ala Ser Gly Ser Gly
210 215 220

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

Leu Leu Glu Val Lys Arg Gly Asp Glu His His Tyr Gln Cys Gln Val
245 250 255

Glu His Glu Gly Leu Ala Gln Pro Leu Thr Val Asp Leu Asp Ser Pro
260 265 270

Ala Arg Ser Ser Val Asn Ser Arg Gly Leu Asn Asp Ile Phe Glu Ala
275 280 285

Gln Lys Ile Glu Trp His Glu His His His His His His Ile Gln Lys
290 295 300

Thr Pro Gln Ile Gln Val Tyr Ser Arg His Pro Pro Glu Asn Gly Lys
305 310 315 320

Pro Asn Phe Leu Asn Cys Tyr Val Ser Gln Phe His Pro Pro Gln Ile

325

330

335

Glu Ile Glu Leu Leu Lys Asn Gly Lys Lys Ile Pro Asn Ile Glu Met
340 345 350

Ser Asp Leu Ser Phe Ser Lys Asp Trp Ser Phe Tyr Ile Leu Ala His
355 360 365

Thr Glu Phe Thr Pro Thr Glu Thr Asp Val Tyr Ala Cys Arg Val Lys
370 375 380

His Val Thr Leu Lys Glu Pro Lys Thr Val Thr Trp Asp Arg Asp Met
385 390 395 400