

SEQUENCE LISTING

<110> F. Hoffmann-La Roche AG

<120> Antibodies against CDCP1 for the treatment of cancer

<130> 26290 FT

<150> EP 09015310.7

<151> 2010-12-10

<160> 32

<170> PatentIn version 3.2

<210> 1

<211> 836

<212> PRT

<213> Homo sapiens

<400> 1

Met Ala Gly Leu Asn Cys Gly Val Ser Ile Ala Leu Leu Gly Val Leu
1 5 10 15

Leu Leu Gly Ala Ala Arg Leu Pro Arg Gly Ala Glu Ala Phe Glu Ile
20 25 30

Ala Leu Pro Arg Glu Ser Asn Ile Thr Val Leu Ile Lys Leu Gly Thr
35 40 45

Pro Thr Leu Leu Ala Lys Pro Cys Tyr Ile Val Ile Ser Lys Arg His
50 55 60

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

Ser Cys Gln Ser Pro Glu Asn His Phe Val Ile Glu Ile Gln Lys Asn
85 90 95

Ile Asp Cys Met Ser Gly Pro Cys Pro Phe Gly Glu Val Gln Leu Gln
100 105 110

Pro Ser Thr Ser Leu Leu Pro Thr Leu Asn Arg Thr Phe Ile Trp Asp
115 120 125

Val Lys Ala His Lys Ser Ile Gly Leu Glu Leu Gln Phe Ser Ile Pro

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

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

Lys Phe Val Pro Gly Cys Phe Val Cys Leu Glu Ser Arg Thr Cys Ser
370 375 380

Ser Asn Leu Thr Leu Thr Ser Gly Ser Lys His Lys Ile Ser Phe Leu
385 390 395 400

Cys Asp Asp Leu Thr Arg Leu Trp Met Asn Val Glu Lys Thr Ile Ser
405 410 415

Cys Thr Asp His Arg Tyr Cys Gln Arg Lys Ser Tyr Ser Leu Gln Val
420 425 430

Pro Ser Asp Ile Leu His Leu Pro Val Glu Leu His Asp Phe Ser Trp
435 440 445

Lys Leu Leu Val Pro Lys Asp Arg Leu Ser Leu Val Leu Val Pro Ala
450 455 460

Gln Lys Leu Gln Gln His Thr His Glu Lys Pro Cys Asn Thr Ser Phe
465 470 475 480

Ser Tyr Leu Val Ala Ser Ala Ile Pro Ser Gln Asp Leu Tyr Phe Gly
485 490 495

Ser Phe Cys Pro Gly Gly Ser Ile Lys Gln Ile Gln Val Lys Gln Asn
500 505 510

Ile Ser Val Thr Leu Arg Thr Phe Ala Pro Ser Phe Arg Gln Glu Ala
515 520 525

Ser Arg Gln Gly Leu Thr Val Ser Phe Ile Pro Tyr Phe Lys Glu Glu
530 535 540

Gly Val Phe Thr Val Thr Pro Asp Thr Lys Ser Lys Val Tyr Leu Arg
545 550 555 560

Thr Pro Asn Trp Asp Arg Gly Leu Pro Ser Leu Thr Ser Val Ser Trp
565 570 575

Asn Ile Ser Val Pro Arg Asp Gln Val Ala Cys Leu Thr Phe Phe Lys
580 585 590

Glu Arg Ser Gly Val Val Cys Gln Thr Gly Arg Ala Phe Met Ile Ile
595 600 605

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

Val Leu Pro Lys Pro Ser Phe His His His Ser Phe Trp Val Asn Ile
625 630 635 640

Ser Asn Cys Ser Pro Thr Ser Gly Lys Gln Leu Asp Leu Leu Phe Ser
645 650 655

Val Thr Leu Thr Pro Arg Thr Val Asp Leu Thr Val Ile Leu Ile Ala
660 665 670

Ala Val Gly Gly Gly Val Leu Leu Leu Ser Ala Leu Gly Leu Ile Ile
675 680 685

Cys Cys Val Lys Lys Lys Lys Lys Lys Thr Asn Lys Gly Pro Ala Val
690 695 700

Gly Ile Tyr Asn Gly Asn Ile Asn Thr Glu Met Pro Arg Gln Pro Lys
705 710 715 720

Lys Phe Gln Lys Gly Arg Lys Asp Asn Asp Ser His Val Tyr Ala Val
725 730 735

Ile Glu Asp Thr Met Val Tyr Gly His Leu Leu Gln Asp Ser Ser Gly
740 745 750

Ser Phe Leu Gln Pro Glu Val Asp Thr Tyr Arg Pro Phe Gln Gly Thr
755 760 765

Met Gly Val Cys Pro Pro Ser Pro Pro Thr Ile Cys Ser Arg Ala Pro
770 775 780

Thr Ala Lys Leu Ala Thr Glu Glu Pro Pro Pro Arg Ser Pro Pro Glu
785 790 795 800

Ser Glu Ser Glu Pro Tyr Thr Phe Ser His Pro Asn Asn Gly Asp Val
805 810 815

Ser Ser Lys Asp Thr Asp Ile Pro Leu Leu Asn Thr Gln Glu Pro Met
820 825 830

Glu Pro Ala Glu
835

<210> 2
<211> 663
<212> PRT
<213> Homo sapiens

<400> 2

Met Ala Gly Leu Asn Cys Gly Val Ser Ile Ala Leu Leu Gly Val Leu
1 5 10 15

Leu Leu Gly Ala Ala Arg Leu Pro Arg Gly Ala Glu Ala Phe Glu Ile
20 25 30

Ala Leu Pro Arg Glu Ser Asn Ile Thr Val Leu Ile Lys Leu Gly Thr
35 40 45

Pro Thr Leu Leu Ala Lys Pro Cys Tyr Ile Val Ile Ser Lys Arg His
50 55 60

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

Ser Cys Gln Ser Pro Glu Asn His Phe Val Ile Glu Ile Gln Lys Asn
85 90 95

Ile Asp Cys Met Ser Gly Pro Cys Pro Phe Gly Glu Val Gln Leu Gln
100 105 110

Pro Ser Thr Ser Leu Leu Pro Thr Leu Asn Arg Thr Phe Ile Trp Asp
115 120 125

Val Lys Ala His Lys Ser Ile Gly Leu Glu Leu Gln Phe Ser Ile Pro
130 135 140

Arg Leu Arg Gln Ile Gly Pro Gly Glu Ser Cys Pro Asp Gly Val Thr
145 150 155 160

His Ser Ile Ser Gly Arg Ile Asp Ala Thr Val Val Arg Ile Gly Thr
165 170 175

Phe Cys Ser Asn Gly Thr Val Ser Arg Ile Lys Met Gln Glu Gly Val
180 185 190

Lys Met Ala Leu His Leu Pro Trp Phe His Pro Arg Asn Val Ser Gly
195 200 205

Phe Ser Ile Ala Asn Arg Ser Ser Ile Lys Arg Leu Cys Ile Ile Glu
210 215 220

Ser Val Phe Glu Gly Glu Gly Ser Ala Thr Leu Met Ser Ala Asn Tyr
225 230 235 240

Pro Glu Gly Phe Pro Glu Asp Glu Leu Met Thr Trp Gln Phe Val Val
245 250 255

Pro Ala His Leu Arg Ala Ser Val Ser Phe Leu Asn Phe Asn Leu Ser
260 265 270

Asn Cys Glu Arg Lys Glu Glu Arg Val Glu Tyr Tyr Ile Pro Gly Ser
275 280 285

Thr Thr Asn Pro Glu Val Phe Lys Leu Glu Asp Lys Gln Pro Gly Asn
290 295 300

Met Ala Gly Asn Phe Asn Leu Ser Leu Gln Gly Cys Asp Gln Asp Ala
305 310 315 320

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

Pro Gln Asn Glu Ser Asn Lys Ile Tyr Val Val Asp Leu Ser Asn Glu
340 345 350

Arg Ala Met Ser Leu Thr Ile Glu Pro Arg Pro Val Lys Gln Ser Arg

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

Asn Ile Ser Val Pro Arg Asp Gln Val Ala Cys Leu Thr Phe Phe Lys
580 585 590

Glu Arg Ser Gly Val Val Cys Gln Thr Gly Arg Ala Phe Met Ile Ile
595 600 605

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

Val Leu Pro Lys Pro Ser Phe His His His Ser Phe Trp Val Asn Ile
625 630 635 640

Ser Asn Cys Ser Pro Thr Ser Gly Lys Gln Leu Asp Leu Leu Phe Ser
645 650 655

Val Thr Leu Thr Pro Arg Thr
660

<210> 3
<211> 330
<212> PRT
<213> Homo sapiens

<400> 3

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
1 5 10 15

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

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

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
50 55 60

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
65 70 75 80

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
85 90 95

Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
100 105 110

Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
115 120 125

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

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
145 150 155 160

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
165 170 175

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
180 185 190

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
195 200 205

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
210 215 220

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu
225 230 235 240

Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
245 250 255

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
260 265 270

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

Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
290 295 300

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
305 310 315 320

Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
325 330

<210> 4
<211> 107
<212> PRT
<213> Homo sapiens

<400> 4

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
1 5 10 15

Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
20 25 30

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
35 40 45

Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
50 55 60

Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
65 70 75 80

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
85 90 95

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
100 105

<210> 5
<211> 104
<212> PRT
<213> Homo sapiens

<400> 5

Pro Lys Ala Ala Pro Ser Val Thr Leu Phe Pro Pro Ser Ser Glu Glu
1 5 10 15

Leu Gln Ala Asn Lys Ala Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr
20 25 30

Pro Gly Ala Val Thr Val Ala Trp Lys Ala Asp Ser Ser Pro Val Lys
35 40 45

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

Ala Ala Ser Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His
65 70 75 80

Arg Ser Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val Glu Lys
85 90 95

Thr Val Ala Pro Thr Glu Cys Ser
100

<210> 6
<211> 327
<212> PRT
<213> Homo sapiens

<400> 6

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

Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
20 25 30

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

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
50 55 60

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr
65 70 75 80

Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys
85 90 95

Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser Cys Pro Ala Pro
100 105 110

Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
115 120 125

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

Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp
145 150 155 160

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe
165 170 175

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
180 185 190

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu
195 200 205

Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
210 215 220

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys
225 230 235 240

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
245 250 255

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
260 265 270

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
275 280 285

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

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
305 310 315 320

Leu Ser Leu Ser Leu Gly Lys
325

<210> 7
<211> 120
<212> PRT
<213> Mus musculus

<400> 7

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

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

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

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

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

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

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

Gly Thr Leu Val Thr Val Ser Ala
115 120

<210> 8
<211> 106
<212> PRT
<213> Mus musculus

<400> 8

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

Glu Lys Val Thr Met Thr Cys Ser Val Ser Ser Ser Val Phe Tyr Val
20 25 30

- 14 -

His Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile Tyr
35 40 45

Asp Thr Ser Lys Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser
50 55 60

Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala Glu
65 70 75 80

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Asn Ser Asn Pro Pro Thr
85 90 95

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

<210> 9
<211> 7
<212> PRT
<213> Mus musculus

<400> 9

Thr Ala Gly Val Gly Val Ser
1 5

<210> 10
<211> 16
<212> PRT
<213> Mus musculus

<400> 10

His Ile Tyr Trp Asp Asp Asp Lys Arg Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 11
<211> 10
<212> PRT
<213> Mus musculus

<400> 11

Ser Thr Ser Val Glu Glu Ala Phe Asp Val
1 5 10

<210> 12
<211> 16

<212> PRT

<213> Mus musculus

<400> 12

Arg Ser Ser Gln Asn Ile Val His Ser Tyr Gly Asn Thr Tyr Leu Glu
1 5 10 15

<210> 13

<211> 7

<212> PRT

<213> Mus musculus

<400> 13

Lys Val Ser Asn Arg Phe Ser
1 5

<210> 14

<211> 9

<212> PRT

<213> Mus musculus

<400> 14

Phe Gln Gly Ser His Val Pro Trp Thr
1 5

<210> 15

<211> 120

<212> PRT

<213> Mus musculus

<400> 15

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

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

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

Trp Leu Ala His Ile Tyr Trp Asp Asp Asp Lys Arg Tyr Asn Pro Ser
50 55 60

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

[illegible]

```
<210> 16
<211> 112
<212> PRT
<213> Mus musculus
```

<400> 16

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

Asp Gln Ala Ser Ile Ser Cys Arg Ser Ser Gln Asn Ile Val His Ser
20 25 30

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

Pro Lys Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro
50 55 60

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

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

Ser His Val Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105 110

```
<210> 17
<211> 7
<212> PRT
<213> Mus musculus
```


<400> 17

Thr Ala Gly Met Gly Val Ser
1 5

<210> 18

<211> 16

<212> PRT

<213> Mus musculus

<400> 18

His Ile Tyr Trp Asp Asp Asp Lys Arg Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 19

<211> 9

<212> PRT

<213> Mus musculus

<400> 19

Ser Asp Ser Phe Gly Asp Phe Asp Tyr
1 5

<210> 20

<211> 16

<212> PRT

<213> Mus musculus

<400> 20

Lys Ser Ser Gln Ser Leu Leu Tyr Thr Asn Gly Lys Thr Tyr Leu Ile
1 5 10 15

<210> 21

<211> 7

<212> PRT

<213> Mus musculus

<400> 21

Leu Val Ser Lys Leu Asp Ser
1 5

<210> 22

<211> 9

<212> PRT

<213> Mus musculus

<400> 22

Leu Gln Ser Thr His Phe Pro Tyr Thr
1 5

<210> 23

<211> 119

<212> PRT

<213> Mus musculus

<400> 23

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

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

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

Trp Leu Ala His Ile Tyr Trp Asp Asp Asp Lys Arg Tyr Asn Pro Ser
50 55 60

Leu Lys Ser Arg Leu Thr Val Ser Lys Gly Thr Ser Arg Asn Gln Val
65 70 75 80

Leu Leu Lys Ile Thr Ser Val Asp Ala Ala Asp Thr Ala Thr Tyr Tyr
85 90 95

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

Thr Thr Leu Thr Val Ser Ser
115

<210> 24

<211> 112

<212> PRT

<213> Mus musculus

<400> 24

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

Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu Tyr Thr
20 25 30

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

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

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

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

Thr His Phe Pro Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 25
<211> 5
<212> PRT
<213> Mus musculus

<400> 25

Asn Phe Gly Leu His
1 5

<210> 26
<211> 16
<212> PRT
<213> Mus musculus

<400> 26

Val Ile Trp Ser Gly Gly Val Thr Asp Tyr Asn Ala Ala Phe Ile Ser
1 5 10 15

<210> 27
<211> 10
<212> PRT
<213> Mus musculus

<400> 27

Asn Tyr Asp His Asp Tyr Ser Met Asp Tyr

1 5 10

<210> 28
<211> 16
<212> PRT
<213> Mus musculus

<400> 28

Lys Ser Thr Lys Ser Leu Leu Asn Ser Ala Gly Phe Thr Tyr Leu Gly
1 5 10 15

<210> 29
<211> 7
<212> PRT
<213> Mus musculus

<400> 29

Leu Val Ser Asn Arg Phe Ser
1 5

<210> 30
<211> 9
<212> PRT
<213> Mus musculus

<400> 30

Phe Gln Ser Ser Tyr Leu Pro Leu Thr
1 5

<210> 31
<211> 118
<212> PRT
<213> Mus musculus

<400> 31

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

Ser Leu Ser Ile Thr Cys Thr Val Ser Gly Phe Ser Leu Thr Asn Phe
20 25 30

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

- 21 -

Gly Val Ile Trp Ser Gly Gly Val Thr Asp Tyr Asn Ala Ala Phe Ile
50 55 60

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

Lys Met Asn Ser Leu Gln Pro Asn Asp Thr Ala Ile Tyr Tyr Cys Ala
85 90 95

Arg Asn Tyr Asp His Asp Tyr Ser Met Asp Tyr Trp Gly Gln Gly Ile
100 105 110

Ser Val Ser Val Ser Ser
115

<210> 32
<211> 112
<212> PRT
<213> Mus musculus

<400> 32

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

Asp Gln Ala Ser Ile Ser Cys Lys Ser Thr Lys Ser Leu Leu Asn Ser
20 25 30

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

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

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

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

Ser Tyr Leu Pro Leu Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
100 105 110