

SEQUENCE LISTING

<110> Max-Delbrück-Centrum für molekulare Medizin Berlin-Buch

<120> Polynucleotides for use in medicine

<130> MDC005WO

<150> US 61/219,125

<151> 2009-06-22

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<170> PatentIn version 3.5

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 770 775 780

Lys Asp Glu Ala Arg Leu Arg Glu Ser Arg His Pro His Pro Asp Asp
 785 790 795 800

Ser Gly Lys Glu Asp Gly Leu Gly Pro Lys Val Thr Arg Ala Pro Glu
 805 810 815

Gly Ala Lys Ala Lys Gln Asn Glu Lys Asn Lys Thr Lys Arg Thr Asp
 820 825 830

Arg Asp Gln Glu Gly Ala Asp Asp Arg Lys Glu Asn Thr Met Ala Glu
 835 840 845

Asn Glu Ala Gly Lys Glu Glu Gln Glu Gly Met Glu Glu Ser Pro Gln
 850 855 860

Ser Val Gly Arg Gln Glu Lys Glu Ala Glu Phe Ser Asp Pro Glu Asn
 865 870 875 880

Thr Arg Thr Lys Lys Glu Gln Asp Trp Glu Ser Glu Ser Glu Ala Glu
 885 890 895

Gly Glu Ser Trp Tyr Pro Thr Asn Met Glu Glu Leu Val Thr Val Asp
 900 905 910

Glu Val Gly Glu Glu Glu Asp Phe Ile Val Glu Pro Asp Ile Pro Glu
 915 920 925

Leu Glu Glu Ile Val Pro Ile Asp Gln Lys Asp Lys Ile Cys Pro Glu
 930 935 940

Thr Cys Leu Cys Val Thr Thr Thr Leu Asp Leu Asp Leu Ala Gln Asp
 945 950 955 960

Phe Pro Lys Glu Gly Val Lys Ala Val Gly Asn Gly Ala Ala Glu Ile

965

970

975

Ser Leu Lys Ser Pro Arg Glu Leu Pro Ser Ala Ser Thr Ser Cys Pro
 980 985 990

Ser Asp Met Asp Val Glu Met Pro Gly Leu Asn Leu Asp Ala Glu Arg
 995 1000 1005

Lys Pro Ala Glu Ser Glu Thr Gly Leu Ser Leu Glu Asp Ser Asp
 1010 1015 1020

Cys Tyr Glu Lys Glu Ala Lys Gly Val Glu Ser Ser Asp Val His
 1025 1030 1035

Pro Ala Pro Thr Val Gln Gln Met Ser Ser Pro Lys Pro Ala Glu
 1040 1045 1050

Glu Arg Ala Arg Gln Pro Ser Pro Phe Val Asp Asp Cys Lys Thr
 1055 1060 1065

Arg Gly Thr Pro Glu Asp Gly Ala Cys Glu Gly Ser Pro Leu Glu
 1070 1075 1080

Glu Lys Ala Ser Pro Pro Ile Glu Thr Asp Leu Gln Asn Gln Ala
 1085 1090 1095

Cys Gln Glu Val Leu Thr Pro Glu Asn Ser Arg Tyr Val Glu Met
 1100 1105 1110

Lys Ser Leu Glu Val Arg Ser Pro Glu Tyr Thr Glu Val Glu Leu
 1115 1120 1125

Lys Gln Pro Leu Ser Leu Pro Ser Trp Glu Pro Glu Asp Val Phe
 1130 1135 1140

Ser Glu Leu Ser Ile Pro Leu Gly Val Glu Phe Val Val Pro Arg
 1145 1150 1155

Thr Gly Phe Tyr Cys Lys Leu Cys Gly Leu Phe Tyr Thr Ser Glu
 1160 1165 1170

Glu Thr Ala Lys Met Ser His Cys Arg Ser Ala Val His Tyr Arg
 1175 1180 1185

Asn Leu Gln Lys Tyr Leu Ser Gln Leu Ala Glu Glu Gly Leu Lys
 1190 1195 1200

Glu Thr Glu Gly Ala Asp Ser Pro Arg Pro Glu Asp Ser Gly Ile
 1205 1210 1215

Val Pro Arg Phe Glu Arg Lys Lys Leu
 1220 1225

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 <211> 1207
 <212> PRT
 <213> Rattus norvegicus

<400> 4

Met Val Leu Ala Ala Ala Met Ser Gln Asp Ala Asp Pro Ser Gly Pro
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Glu Gln Pro Asp Arg Asp Ala Cys Ile Val Pro Gly Val Gln Gly Pro
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Pro Ala Pro Gln Gly Gln Gln Gly Met Gln Pro Leu Pro Pro Pro Leu
 35 40 45

Pro Pro Pro Pro Gln Pro Gln Ser Ser Leu Pro Gln Ile Ile Gln Asn
 50 55 60

Ala Ala Lys Leu Leu Asp Lys Asn Pro Phe Ser Val Ser Ser Gln Asn
 65 70 75 80

Pro Leu Leu Thr Ser Pro Ala Ser Val Gln Leu Ala Gln Ile Gln Ala
 85 90 95

Gln Leu Thr Leu His Arg Leu Lys Met Ala Gln Thr Ala Val Thr Asn
 100 105 110

Asn Thr Ala Ala Ala Thr Val Leu Asn Gln Val Leu Ser Lys Val Ala
 115 120 125

Met Ser Gln Pro Leu Phe Asn Gln Leu Arg His Pro Ser Val Leu Gly
 130 135 140

Thr Thr His Gly Pro Thr Gly Val Ser Gln His Ala Ala Thr Val Pro
 145 150 155 160

Ser Ala His Phe Pro Ser Thr Ala Ile Ala Phe Ser Pro Pro Ser Gln
 165 170 175

Ala Gly Gly Pro Gly Pro Ser Val Ser Leu Pro Ser Gln Pro Pro Asn
 180 185 190

Ala Met Val Val His Thr Phe Ser Gly Val Val Pro Gln Thr Pro Ala
 195 200 205

Gln Pro Ala Val Ile Leu Ser Ile Gly Lys Ala Gly Pro Thr Pro Ala
 210 215 220

Thr Thr Gly Phe Tyr Asp Tyr Gly Lys Ala Asn Pro Gly Gln Ala Tyr
 225 230 235 240

Gly Ser Glu Thr Glu Gly Gln Pro Gly Phe Leu Pro Ala Ser Ala Ser
 245 250 255

Ala Ala Ala Ser Gly Gly Val Thr Tyr Glu Gly His Tyr Ser His Thr
 260 265 270

Gly Gln Asp Gly Gln Ala Thr Phe Ser Lys Asp Phe Tyr Gly Pro Ser
 275 280 285

Ala Gln Gly Ser His Ala Ala Gly Gly Phe Pro Ala Asp Gln Ala Gly
 290 295 300

Ser Met Lys Gly Asp Val Gly Gly Leu Leu Gln Gly Thr Asn Ser Gln
 305 310 315 320

Trp Glu Arg Pro Ser Gly Phe Ser Gly Gln Asn Lys Ala Asp Ile Thr
 325 330 335

Ala Gly Pro Gly Leu Trp Ala Pro Pro Ala Ser Gln Pro Tyr Glu Leu
 340 345 350

Tyr Asp Pro Glu Glu Pro Thr Ser Asp Arg Ala Pro Pro Ala Phe Gly
 355 360 365

Ser Arg Leu Asn Asn Ser Lys Gln Gly Phe Asn Cys Ser Cys Arg Arg

370

375

380

Thr Lys Glu Gly Gln Ala Met Leu Ser Val Arg Pro Leu Gln Gly His
 385 390 395 400

Gln Leu Asn Asp Phe Arg Gly Leu Ala Pro Leu His Leu Pro His Ile
 405 410 415

Cys Ser Ile Cys Asp Lys Lys Val Phe Asp Leu Lys Asp Trp Glu Leu
 420 425 430

His Val Lys Gly Lys Leu His Ala Gln Lys Cys Leu Leu Phe Ser Glu
 435 440 445

Ser Ala Gly Leu Arg Ser Ile Cys Ala Thr Gly Glu Gly Thr Leu Ser
 450 455 460

Ala Ser Ala Asn Ser Thr Ala Val Tyr Asn Pro Thr Gly Asn Glu Asp
 465 470 475 480

Tyr Thr Ser Thr Leu Gly Thr Ser Tyr Ala Ala Ile Pro Thr Arg Ala
 485 490 495

Phe Ala Gln Ser Asn Pro Met Phe Pro Ser Ala Ser Ser Gly Thr Asn
 500 505 510

Phe Ala Gln Arg Lys Gly Ala Gly Arg Val Val His Ile Cys Asn Leu
 515 520 525

Pro Glu Gly Ser Cys Thr Glu Asn Asp Val Ile Asn Leu Gly Leu Pro
 530 535 540

Phe Gly Lys Val Thr Asn Tyr Ile Leu Met Lys Ser Thr Asn Gln Ala
 545 550 555 560

Phe Leu Glu Met Ala Tyr Thr Glu Ala Ala Gln Ala Met Val Gln Tyr
 565 570 575

Tyr Gln Glu Lys Pro Ala Leu Ile Asn Gly Glu Lys Leu Leu Ile Arg
 580 585 590

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

Val Ala Ala Ile Ile Gln Asp Ile His Ser Gln Arg Glu Arg Cys Met
 610 615 620

Leu Arg Glu Ala Asp Arg Tyr Gly Pro Glu Arg Pro Arg Ser Arg Ser
 625 630 635 640

Pro Met Ser Arg Ser Leu Ser Pro Arg Ser His Ser Pro Pro Gly Pro
 645 650 655

Ser Arg Ala Asp Trp Gly Asn Gly Arg Asp Ser Tyr Ala Trp Arg Asp
 660 665 670

Glu Asp Arg Glu Thr Val Pro Arg Arg Glu Asn Gly Glu Asp Lys Arg
 675 680 685

Asp Arg Leu Asp Val Trp Ala His Asp Arg Lys His Tyr Pro Arg Gln
 690 695 700

Leu Asp Lys Ala Glu Leu Asp Glu Arg Leu Glu Gly Gly Arg Gly Tyr
 705 710 715 720

Arg Glu Lys Tyr Leu Lys Ser Gly Ser Pro Gly Pro Leu His Ser Ala
 725 730 735

Ser Gly Tyr Lys Gly Arg Glu Asp Gly Tyr His Arg Lys Glu Thr Lys
 740 745 750

Ala Lys Leu Asp Lys His Pro Lys Gln Gln Gln Gln Asp Val Pro Gly
 755 760 765

Arg Ser Arg Arg Lys Glu Glu Ala Arg Leu Arg Glu Pro Arg His Pro
 770 775 780

His Pro Glu Asp Ser Gly Lys Glu Glu Asp Leu Glu Pro Lys Val Thr
 785 790 795 800

Arg Ala Pro Glu Gly Thr Lys Ser Lys Gln Ser Glu Lys Ser Lys Thr
 805 810 815

Lys Arg Ala Asp Arg Asp Gln Glu Gly Ala Asp Asp Lys Lys Glu Gly
 820 825 830

Arg Gly Ala Glu Asn Glu Ala Gly Thr Glu Glu Gln Glu Gly Met Glu
 835 840 845

Glu Ser Pro Ala Ser Val Gly Thr Gln Gln Glu Gly Thr Glu Ser Ser
 850 855 860

Asp Pro Glu Asn Thr Arg Thr Lys Lys Gly Gln Asp Cys Asp Ser Gly
 865 870 875 880

Ser Glu Pro Glu Gly Asp Asn Trp Tyr Pro Thr Asn Met Glu Glu Leu
 885 890 895

Val Thr Val Asp Glu Val Gly Glu Glu Asp Phe Ile Met Glu Pro Asp
 900 905 910

Ile Pro Glu Leu Glu Glu Ile Val Pro Ile Asp Gln Lys Asp Lys Ile
 915 920 925

Leu Pro Glu Ile Cys Pro Cys Val Thr Ala Thr Leu Gly Leu Asp Leu
 930 935 940

Ala Lys Asp Phe Thr Lys Gln Gly Glu Thr Leu Gly Asn Gly Asp Ala
 945 950 955 960

Glu Leu Ser Pro Lys Leu Pro Gly Gln Val Pro Ser Thr Ser Thr Ser
 965 970 975

Cys Pro Asn Asp Thr Asp Met Glu Met Ala Gly Leu Asn Leu Asp Ala
 980 985 990

Glu Arg Lys Pro Ala Glu Ser Glu Thr Gly Leu Ser Pro Glu Val Ser
 995 1000 1005

Asn Cys Tyr Glu Lys Glu Ala Arg Gly Ala Glu Gly Ser Asp Val
 1010 1015 1020

Arg Leu Ala Pro Ala Ala Gln Arg Met Ser Ser Pro Gln Pro Ala
 1025 1030 1035

Asp Glu Arg Ala Gln Gln Ser Ser Pro Phe Leu Asp Asp Cys Lys
 1040 1045 1050

Ala Arg Gly Ser Pro Glu Asp Gly Pro His Glu Val Ser Pro Leu
1055 1060 1065

Glu Glu Lys Ala Ser Pro Thr Thr Glu Ser Asp Leu Gln Ser Gln
1070 1075 1080

Ala Cys Gln Glu Asn Ser Arg Tyr Thr Glu Thr Arg Ser Leu Asn
1085 1090 1095

Ser Arg Ser Pro Glu Phe Thr Glu Ala Glu Leu Lys Glu Pro Leu
1100 1105 1110

Ser Leu Pro Ser Trp Glu Pro Glu Val Phe Ser Glu Leu Ser Ile
1115 1120 1125

Pro Leu Gly Val Glu Phe Val Val Pro Arg Thr Gly Phe Tyr Cys
1130 1135 1140

Lys Leu Cys Gly Leu Phe Tyr Thr Ser Glu Glu Ala Ala Lys Val
1145 1150 1155

Ser His Cys Arg Ser Thr Val His Tyr Arg Asn Leu Gln Lys Tyr
1160 1165 1170

Leu Ser Gln Leu Ala Glu Glu Gly Leu Lys Glu Thr Glu Gly Val
1175 1180 1185

Asp Ser Pro Ser Pro Glu Arg Ser Gly Ile Gly Pro His Leu Glu
1190 1195 1200

Arg Lys Lys Leu
1205

<210> 5
<211> 1227
<212> PRT
<213> Homo sapiens

<400> 5

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

Gln Pro Pro Pro Pro Pro Gln Ala Gly Leu Pro Gln Ile Ile Gln Asn
 50 55 60

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

Pro Leu Leu Pro Ser Pro Ala Ser Leu Gln Leu Ala Gln Leu Gln Ala
 85 90 95

Gln Leu Thr Leu His Arg Leu Lys Leu Ala Gln Thr Ala Val Thr Asn
 100 105 110

Asn Thr Ala Ala Ala Thr Val Leu Asn Gln Val Leu Ser Lys Val Ala
 115 120 125

Met Ser Gln Pro Leu Phe Asn Gln Leu Arg His Pro Ser Val Ile Thr
 130 135 140

Gly Pro His Gly His Ala Gly Val Pro Gln His Ala Ala Ala Ile Pro
 145 150 155 160

Ser Thr Arg Phe Pro Ser Asn Ala Ile Ala Phe Ser Pro Pro Ser Gln
 165 170 175

Thr Arg Gly Pro Gly Pro Ser Met Asn Leu Pro Asn Gln Pro Pro Ser
 180 185 190

Ala Met Val Met His Pro Phe Thr Gly Val Met Pro Gln Thr Pro Gly
 195 200 205

Gln Pro Ala Val Ile Leu Gly Ile Gly Lys Thr Gly Pro Ala Pro Ala
 210 215 220

Thr Ala Gly Phe Tyr Glu Tyr Gly Lys Ala Ser Ser Gly Gln Thr Tyr
 225 230 235 240

Gly Pro Glu Thr Asp Gly Gln Pro Gly Phe Leu Pro Ser Ser Ala Ser
 245 250 255

Thr Ser Gly Ser Val Thr Tyr Glu Gly His Tyr Ser His Thr Gly Gln
 260 265 270

Asp Gly Gln Ala Ala Phe Ser Lys Asp Phe Tyr Gly Pro Asn Ser Gln
 275 280 285

Gly Ser His Val Ala Ser Gly Phe Pro Ala Glu Gln Ala Gly Gly Leu
 290 295 300

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

Ser Pro His Gly Phe Ser Gly Gln Ser Lys Pro Asp Leu Thr Ala Gly
 325 330 335

Pro Met Trp Pro Pro Pro His Asn Gln Pro Tyr Glu Leu Tyr Asp Pro
 340 345 350

Glu Glu Pro Thr Ser Asp Arg Thr Pro Pro Ser Phe Gly Gly Arg Leu
 355 360 365

Asn Asn Ser Lys Gln Gly Phe Ile Gly Ala Gly Arg Arg Ala Lys Glu
 370 375 380

Asp Gln Ala Leu Leu Ser Val Arg Pro Leu Gln Ala His Glu Leu Asn
 385 390 395 400

Asp Phe His Gly Val Ala Pro Leu His Leu Pro His Ile Cys Ser Ile
 405 410 415

Cys Asp Lys Lys Val Phe Asp Leu Lys Asp Trp Glu Leu His Val Lys
 420 425 430

Gly Lys Leu His Ala Gln Lys Cys Leu Val Phe Ser Glu Asn Ala Gly
 435 440 445

Ile Arg Cys Ile Leu Gly Ser Ala Glu Gly Thr Leu Cys Ala Ser Pro
 450 455 460

Asn Ser Thr Ala Val Tyr Asn Pro Ala Gly Asn Glu Asp Tyr Ala Ser
 465 470 475 480

Asn Leu Gly Thr Ser Tyr Val Pro Ile Pro Ala Arg Ser Phe Thr Gln
 485 490 495

Ser Ser Pro Thr Phe Pro Leu Ala Ser Val Gly Thr Thr Phe Ala Gln
 500 505 510

Arg Lys Gly Ala Gly Arg Val Val His Ile Cys Asn Leu Pro Glu Gly
 515 520 525

Ser Cys Thr Glu Asn Asp Val Ile Asn Leu Gly Leu Pro Phe Gly Lys
 530 535 540

Val Thr Asn Tyr Ile Leu Met Lys Ser Thr Asn Gln Ala Phe Leu Glu
 545 550 555 560

Met Ala Tyr Thr Glu Ala Ala Gln Ala Met Val Gln Tyr Tyr Gln Glu
 565 570 575

Lys Ser Ala Val Ile Asn Gly Glu Lys Leu Leu Ile Arg Met Ser Lys
 580 585 590

Arg Tyr Lys Glu Leu Gln Leu Lys Lys Pro Gly Lys Ala Val Ala Ala
 595 600 605

Ile Ile Gln Asp Ile His Ser Gln Arg Glu Arg Asp Met Phe Arg Glu
 610 615 620

Ala Asp Arg Tyr Gly Pro Glu Arg Pro Arg Ser Arg Ser Leu Val Ser
 625 630 635 640

Arg Ser Leu Ser Pro Arg Ser His Thr Pro Ser Phe Thr Ser Cys Ser
 645 650 655

Ser Ser His Ser Pro Pro Gly Pro Ser Arg Ala Asp Trp Gly Asn Gly
 660 665 670

Arg Asp Ser Trp Glu His Ser Pro Tyr Ala Arg Arg Glu Glu Glu Arg
 675 680 685

Asp Pro Ala Pro Trp Arg Asp Asn Gly Asp Asp Lys Arg Asp Arg Met
 690 695 700

Asp Pro Trp Ala His Asp Arg Lys His His Pro Arg Gln Leu Asp Lys

705		710		715		720									
Ala	Glu	Leu	Asp	Glu	Arg	Pro	Glu	Gly	Gly	Arg	Pro	His	Arg	Glu	Lys
			725						730					735	
Tyr	Pro	Arg	Ser	Gly	Ser	Pro	Asn	Leu	Pro	His	Ser	Val	Ser	Ser	Tyr
			740					745					750		
Lys	Ser	Arg	Glu	Asp	Gly	Tyr	Tyr	Arg	Lys	Glu	Pro	Lys	Ala	Lys	Trp
		755					760					765			
Asp	Lys	Tyr	Leu	Lys	Gln	Gln	Gln	Asp	Ala	Pro	Gly	Arg	Ser	Arg	Arg
	770					775					780				
Lys	Asp	Glu	Ala	Arg	Leu	Arg	Glu	Ser	Arg	His	Pro	His	Pro	Asp	Asp
785					790					795					800
Ser	Gly	Lys	Glu	Asp	Gly	Leu	Gly	Pro	Lys	Val	Thr	Arg	Ala	Pro	Glu
				805					810					815	
Gly	Ala	Lys	Ala	Lys	Gln	Asn	Glu	Lys	Asn	Lys	Thr	Lys	Arg	Thr	Asp
			820					825					830		
Arg	Asp	Gln	Glu	Gly	Ala	Asp	Asp	Arg	Lys	Glu	Asn	Thr	Met	Ala	Glu
		835					840					845			
Asn	Glu	Ala	Gly	Lys	Glu	Glu	Gln	Glu	Gly	Met	Glu	Glu	Ser	Pro	Gln
	850					855					860				
Ser	Val	Gly	Arg	Gln	Glu	Lys	Glu	Ala	Glu	Phe	Ser	Asp	Pro	Glu	Asn
865					870					875					880
Thr	Arg	Thr	Lys	Lys	Glu	Gln	Asp	Trp	Glu	Ser	Glu	Ser	Glu	Ala	Glu
				885					890					895	
Gly	Glu	Ser	Trp	Tyr	Pro	Thr	Asn	Met	Glu	Glu	Leu	Val	Thr	Val	Asp
			900					905					910		
Glu	Val	Gly	Glu	Glu	Glu	Asp	Phe	Ile	Val	Glu	Pro	Asp	Ile	Pro	Glu
		915					920					925			
Leu	Glu	Glu	Ile	Val	Pro	Ile	Asp	Gln	Lys	Asp	Lys	Ile	Cys	Pro	Glu
	930					935					940				

Thr Cys Leu Cys Val Thr Thr Thr Leu Asp Leu Asp Leu Ala Gln Asp
 945 950 955 960

Phe Pro Lys Glu Gly Val Lys Ala Val Gly Asn Gly Ala Ala Glu Ile
 965 970 975

Ser Leu Lys Ser Pro Arg Glu Leu Pro Ser Ala Ser Thr Ser Cys Pro
 980 985 990

Ser Asp Met Asp Val Glu Met Pro Gly Leu Asn Leu Asp Ala Glu Arg
 995 1000 1005

Lys Pro Ala Glu Ser Glu Thr Gly Leu Ser Leu Glu Asp Ser Asp
 1010 1015 1020

Cys Tyr Glu Lys Glu Ala Lys Gly Val Glu Ser Ser Asp Val His
 1025 1030 1035

Pro Ala Pro Thr Val Gln Gln Met Ser Ser Pro Lys Pro Ala Glu
 1040 1045 1050

Glu Arg Ala Arg Gln Pro Ser Pro Phe Val Asp Asp Cys Lys Thr
 1055 1060 1065

Arg Gly Thr Pro Glu Asp Gly Ala Cys Glu Gly Ser Pro Leu Glu
 1070 1075 1080

Glu Lys Ala Ser Pro Pro Ile Glu Thr Asp Leu Gln Asn Gln Ala
 1085 1090 1095

Cys Gln Glu Val Leu Thr Pro Glu Asn Ser Arg Tyr Val Glu Met
 1100 1105 1110

Lys Ser Leu Glu Val Arg Ser Pro Glu Tyr Thr Glu Val Glu Leu
 1115 1120 1125

Lys Gln Pro Leu Ser Leu Pro Ser Trp Glu Pro Glu Asp Val Phe
 1130 1135 1140

Ser Glu Leu Ser Ile Pro Leu Gly Val Glu Phe Val Val Pro Arg
 1145 1150 1155

Thr Gly Phe Tyr Cys Lys Leu Cys Gly Leu Phe Tyr Thr Ser Glu
1160 1165 1170

Glu Thr Ala Lys Met Ser His Cys Arg Ser Ala Val His Tyr Arg
1175 1180 1185

Asn Leu Gln Lys Tyr Leu Ser Gln Leu Ala Glu Glu Gly Leu Lys
1190 1195 1200

Glu Thr Glu Gly Ala Asp Ser Pro Arg Pro Glu Asp Ser Gly Ile
1205 1210 1215

Val Pro Arg Phe Glu Arg Lys Lys Leu
1220 1225

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

<400> 6

Met Val Leu Ala Ala Ala Met Ser Gln Asp Ala Asp Pro Ser Gly Pro
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Glu Gln Pro Asp Arg Asp Ala Cys Ile Val Pro Gly Val Gln Gly Pro
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Pro Ala Pro Gln Gly Gln Gln Gly Met Gln Pro Leu Pro Pro Pro Leu
35 40 45

Pro Pro Pro Pro Gln Pro Gln Ser Ser Leu Pro Gln Ile Ile Gln Asn
50 55 60

Ala Ala Lys Leu Leu Asp Lys Asn Pro Phe Ser Val Ser Ser Gln Asn
65 70 75 80

Pro Leu Leu Thr Ser Pro Ala Ser Val Gln Leu Ala Gln Ile Gln Ala
85 90 95

Gln Leu Thr Leu His Arg Leu Lys Met Ala Gln Thr Ala Val Thr Asn
100 105 110

Asn Thr Ala Ala Ala Thr Val Leu Asn Gln Val Leu Ser Lys Val Ala

115		120		125											
Met	Ser	Gln	Pro	Leu	Phe	Asn	Gln	Leu	Arg	His	Pro	Ser	Val	Leu	Gly
130						135					140				
Thr	Thr	His	Gly	Pro	Thr	Gly	Val	Ser	Gln	His	Ala	Ala	Thr	Val	Pro
145					150					155					160
Ser	Ala	His	Phe	Pro	Ser	Thr	Ala	Ile	Ala	Phe	Ser	Pro	Pro	Ser	Gln
				165					170					175	
Ala	Gly	Gly	Pro	Gly	Pro	Ser	Val	Ser	Leu	Pro	Ser	Gln	Pro	Pro	Asn
			180					185					190		
Ala	Met	Val	Val	His	Thr	Phe	Ser	Gly	Val	Val	Pro	Gln	Thr	Pro	Ala
	195						200					205			
Gln	Pro	Ala	Val	Ile	Leu	Ser	Ile	Gly	Lys	Ala	Gly	Pro	Thr	Pro	Ala
210						215					220				
Thr	Thr	Gly	Phe	Tyr	Asp	Tyr	Gly	Lys	Ala	Asn	Pro	Gly	Gln	Ala	Tyr
225					230					235					240
Gly	Ser	Glu	Thr	Glu	Gly	Gln	Pro	Gly	Phe	Leu	Pro	Ala	Ser	Ala	Ser
				245					250					255	
Ala	Ala	Ala	Ser	Gly	Gly	Val	Thr	Tyr	Glu	Gly	His	Tyr	Ser	His	Thr
			260					265					270		
Gly	Gln	Asp	Gly	Gln	Ala	Thr	Phe	Ser	Lys	Asp	Phe	Tyr	Gly	Pro	Ser
		275					280					285			
Ala	Gln	Gly	Ser	His	Ala	Ala	Gly	Gly	Phe	Pro	Ala	Asp	Gln	Ala	Gly
290						295					300				
Ser	Met	Lys	Gly	Asp	Val	Gly	Gly	Leu	Leu	Gln	Gly	Thr	Asn	Ser	Gln
305					310					315					320
Trp	Glu	Arg	Pro	Ser	Gly	Phe	Ser	Gly	Gln	Asn	Lys	Ala	Asp	Ile	Thr
				325					330					335	
Ala	Gly	Pro	Gly	Leu	Trp	Ala	Pro	Pro	Ala	Ser	Gln	Pro	Tyr	Glu	Leu
			340					345					350		

Tyr Asp Pro Glu Glu Pro Thr Ser Asp Arg Ala Pro Pro Ala Phe Gly
 355 360 365

Ser Arg Leu Asn Asn Ser Lys Gln Gly Phe Asn Cys Ser Cys Arg Arg
 370 375 380

Thr Lys Glu Gly Gln Ala Met Leu Ser Val Arg Pro Leu Gln Gly His
 385 390 395 400

Gln Leu Asn Asp Phe Arg Gly Leu Ala Pro Leu His Leu Pro His Ile
 405 410 415

Cys Ser Ile Cys Asp Lys Lys Val Phe Asp Leu Lys Asp Trp Glu Leu
 420 425 430

His Val Lys Gly Lys Leu His Ala Gln Lys Cys Leu Leu Phe Ser Glu
 435 440 445

Ser Ala Gly Leu Arg Ser Ile Cys Ala Thr Gly Glu Gly Thr Leu Ser
 450 455 460

Ala Ser Ala Asn Ser Thr Ala Val Tyr Asn Pro Thr Gly Asn Glu Asp
 465 470 475 480

Tyr Thr Ser Thr Leu Gly Thr Ser Tyr Ala Ala Ile Pro Thr Arg Ala
 485 490 495

Phe Ala Gln Ser Asn Pro Met Phe Pro Ser Ala Ser Ser Gly Thr Asn
 500 505 510

Phe Ala Gln Arg Lys Gly Ala Gly Arg Val Val His Ile Cys Asn Leu
 515 520 525

Pro Glu Gly Ser Cys Thr Glu Asn Asp Val Ile Asn Leu Gly Leu Pro
 530 535 540

Phe Gly Lys Val Thr Asn Tyr Ile Leu Met Lys Ser Thr Asn Gln Ala
 545 550 555 560

Phe Leu Glu Met Ala Tyr Thr Glu Ala Ala Gln Ala Met Val Gln Tyr
 565 570 575

Tyr Gln Glu Lys Pro Ala Leu Ile Asn Gly Glu Lys Leu Leu Ile Arg
580 585 590

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

Val Ala Ala Ile Ile Gln Asp Ile His Ser Gln Arg Glu Arg Cys Met
610 615 620

Leu Arg Glu Ala Asp Arg Tyr Gly Pro Glu Arg Pro Arg Ser Arg Ser
625 630 635 640

Leu Met Ser Arg Ser Leu Ser Pro Arg Ser His Ser Pro Pro Gly Pro
645 650 655

Ser Arg Ala Asp Trp Gly Asn Gly Arg Asp Ser Tyr Ala Trp Arg Asp
660 665 670

Glu Asp Arg Glu Thr Val Pro Arg Arg Glu Asn Gly Glu Asp Lys Arg
675 680 685

Asp Arg Leu Asp Val Trp Ala His Asp Arg Lys His Tyr Pro Arg Gln
690 695 700

Leu Asp Lys Ala Glu Leu Asp Glu Arg Leu Glu Gly Gly Arg Gly Tyr
705 710 715 720

Arg Glu Lys Tyr Leu Lys Ser Gly Ser Pro Gly Pro Leu His Ser Ala
725 730 735

Ser Gly Tyr Lys Gly Arg Glu Asp Gly Tyr His Arg Lys Glu Thr Lys
740 745 750

Ala Lys Leu Asp Lys His Pro Lys Gln Gln Gln Gln Asp Val Pro Gly
755 760 765

Arg Ser Arg Arg Lys Glu Glu Ala Arg Leu Arg Glu Pro Arg His Pro
770 775 780

His Pro Glu Asp Ser Gly Lys Glu Glu Asp Leu Glu Pro Lys Val Thr
785 790 795 800

Arg Ala Pro Glu Gly Thr Lys Ser Lys Gln Ser Glu Lys Ser Lys Thr
805 810 815

Lys Arg Ala Asp Arg Asp Gln Glu Gly Ala Asp Asp Lys Lys Glu Gly
820 825 830

Arg Gly Ala Glu Asn Glu Ala Gly Thr Glu Glu Gln Glu Gly Met Glu
835 840 845

Glu Ser Pro Ala Ser Val Gly Thr Gln Gln Glu Gly Thr Glu Ser Ser
850 855 860

Asp Pro Glu Asn Thr Arg Thr Lys Lys Gly Gln Asp Cys Asp Ser Gly
865 870 875 880

Ser Glu Pro Glu Gly Asp Asn Trp Tyr Pro Thr Asn Met Glu Glu Leu
885 890 895

Val Thr Val Asp Glu Val Gly Glu Glu Asp Phe Ile Met Glu Pro Asp
900 905 910

Ile Pro Glu Leu Glu Glu Ile Val Pro Ile Asp Gln Lys Asp Lys Ile
915 920 925

Leu Pro Glu Ile Cys Pro Cys Val Thr Ala Thr Leu Gly Leu Asp Leu
930 935 940

Ala Lys Asp Phe Thr Lys Gln Gly Glu Thr Leu Gly Asn Gly Asp Ala
945 950 955 960

Glu Leu Ser Pro Lys Leu Pro Gly Gln Val Pro Ser Thr Ser Thr Ser
965 970 975

Cys Pro Asn Asp Thr Asp Met Glu Met Ala Gly Leu Asn Leu Asp Ala
980 985 990

Glu Arg Lys Pro Ala Glu Ser Glu Thr Gly Leu Ser Pro Glu Val Ser
995 1000 1005

Asn Cys Tyr Glu Lys Glu Ala Arg Gly Ala Glu Gly Ser Asp Val
1010 1015 1020

Arg Leu Ala Pro Ala Ala Gln Arg Met Ser Ser Pro Gln Pro Ala

1025		1030		1035
Asp Glu Arg Ala Gln Gln Ser Ser Pro Phe Leu Asp Asp Cys Lys				
1040		1045		1050
Ala Arg Gly Ser Pro Glu Asp Gly Pro His Glu Val Ser Pro Leu				
1055		1060		1065
Glu Glu Lys Ala Ser Pro Thr Thr Glu Ser Asp Leu Gln Ser Gln				
1070		1075		1080
Ala Cys Gln Glu Asn Ser Arg Tyr Thr Glu Thr Arg Ser Leu Asn				
1085		1090		1095
Ser Arg Ser Pro Glu Phe Thr Glu Ala Glu Leu Lys Glu Pro Leu				
1100		1105		1110
Ser Leu Pro Ser Trp Glu Pro Glu Val Phe Ser Glu Leu Ser Ile				
1115		1120		1125
Pro Leu Gly Val Glu Phe Val Val Pro Arg Thr Gly Phe Tyr Cys				
1130		1135		1140
Lys Leu Cys Gly Leu Phe Tyr Thr Ser Glu Glu Ala Ala Lys Val				
1145		1150		1155
Ser His Cys Arg Ser Thr Val His Tyr Arg Asn Leu Gln Lys Tyr				
1160		1165		1170
Leu Ser Gln Leu Ala Glu Glu Gly Leu Lys Glu Thr Glu Gly Val				
1175		1180		1185
Asp Ser Pro Ser Pro Glu Arg Ser Gly Ile Gly Pro His Leu Glu				
1190		1195		1200
Arg Lys Lys Leu				
1205				

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 <212> DNA
 <213> Artificial Sequence
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<223> primer

<400> 7
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21

<210> 8
<211> 21
<212> RNA
<213> Artificial Sequence

<220>
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