

60571HOW - complete sequence listing.txt
SEQUENCE LISTING

<110> Howard Hughes Medical Institute

<120> VARIANT ADENO-ASSOCIATED VIRUSES AND METHODS OF USING

<130> 30872-0013W01

<140> PCT/US2017/037781
<141> 2017-06-15

<150> 62/404,585
<151> 2016-10-05

<150> 62/350,361
<151> 2016-06-15

<160> 108

<170> PatentIn version 3.5

<210> 1
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically generated sequence

<220>
<221> misc_feature
<222> (1)..(2)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (4)..(4)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (7)..(7)
<223> Xaa can be any naturally occurring amino acid

<400> 1

Xaa Xaa Asp Xaa Thr Lys Xaa
1 5

<210> 2

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

 <220>
 <223> synthetically generated sequence

<220>
 <221> misc_feature
 <222> (1)..(1)
 <223> Xaa can be any naturally occurring amino acid

<220>
 <221> misc_feature
 <222> (3)..(3)
 <223> Xaa can be any naturally occurring amino acid

<220>
 <221> misc_feature
 <222> (6)..(7)
 <223> Xaa can be any naturally occurring amino acid

<400> 2

Xaa Asp Xaa Thr Lys Xaa Xaa
 1 5

<210> 3
 <211> 2238
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> synthetically generated sequence

<400> 3
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 gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac 180
 aagggagagc cgggtcaacga ggcagacgcc gcggccctcg agcacgacaa agcctacgac 240
 cggcagctcg acagcggaga caacccttac ctcaagtaca accacgccga cgcggagttt 300
 caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag 360
 gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg 420

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ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga	480
aaggcggggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac	540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctcttgg tctgggaact	600
aatacgatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga	660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcca cagagtcac	720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt	780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagaggcca cgcagaatga cggtagcagc acgattgcca ataaccttac cagcacgggt	1020
cagggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgcctcccg cgttcccagc agacgtcttc atgggtccac agtatggata cctcaccctg	1140
aacaacggga gtcaggcagt aggacgctct tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccgaaa caactttacc ttacgtaca cttttgagga cgttccttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgacatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaaca cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaaggc catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcaatc tccgaccaga caaaacacgc taggcaagca	1800
gtaccgcag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat	1860
gtgtaccttc aggggcccac ctgggcaaag attccacaca cggacggaca ttttcacccc	1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac	1980

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accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcac 2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac 2100
agcaaacgct ggaatcccga aattcagtac acttccaact acaacaagtc tattaatgtg 2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac 2220
ctgactcgta atctgtaa 2238

<210> 4

<211> 746

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 4

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
1 5 10 15

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
20 25 30

Lys Pro Ala Glu Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

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Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

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

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
325 330 335

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Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
385 390 395 400

Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Thr Phe Glu
405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
530 535 540

60571HOW - complete sequence listing.txt

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala Ile Ser Asp
580 585 590

Gln Thr Lys His Ala Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr
595 600 605

Gln Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu
610 615 620

Gln Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His
625 630 635 640

Pro Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln
645 650 655

Ile Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe
660 665 670

Ser Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln
675 680 685

Val Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg
690 695 700

Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn
705 710 715 720

Val Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro
725 730 735

Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

60571HOW - complete sequence listing.txt

<210> 5
 <211> 2238
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> synthetically generated sequence

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 cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcataaggac 120
 gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac 180
 aagggagagc cgggtcaacga ggcagacgcc gcggccctcg agcacgacaa agcctacgac 240
 cggcagctcg acagcggaga caaccctgac ctcaagtaca accacgccga cgcggagttt 300
 caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag 360
 gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg 420
 ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga 480
 aaggcgggcc agcagcctgc aaaaaaaga ttgaattttg gtcagactgg agacgcagac 540
 tcagtacctg acccccagcc tctcggacag ccaccagcag cccctctggg tctgggaact 600
 aatacgatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga 660
 gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac 720
 accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt 780
 tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg 840
 tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc 900
 aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc 960
 aaagaggta cgcagaatga cggtagcagc acgattgcc aataaccttac cagcacggtt 1020
 caggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga 1080
 tgcctcccg cgttcccagc agacgtcttc atgggtccac agtatggata cctcacctg 1140
 aacaacggga gtcaggcagt aggacgtctt tcattttact gcctggagta ctttccttct 1200
 cagatgctgc gtaccgaaa caactttacc ttcagctaca cttttgagga cgttcctttc 1260

60571HOW - complete sequence listing.txt

cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgacatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaacaa cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggg gaatccgggc	1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaagggt catgattaca	1680
aacgaagagg aaatcagggc aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcaatc tccgaccaga caaaacacgc taggcaagca	1800
gctaccgcag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat	1860
gtgtaccttc aggggcccac ctgggcaaag attccacaca cggacggaca ttttcacccc	1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac	1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcac	2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac	2100
agcaaacgct ggaatcccga aattcagtac acttccaact acaacaagtc tattaatgtg	2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac	2220
ctgactcgta atctgtaa	2238

<210> 6

<211> 746

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 6

Met	Ala	Ala	Asp	Gly	Tyr	Leu	Pro	Asp	Trp	Leu	Glu	Asp	Thr	Leu	Ser
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Glu	Gly	Ile	Arg	Gln	Trp	Trp	Lys	Leu	Lys	Pro	Gly	Pro	Pro	Pro	Pro
			20					25					30		

60571HOW - complete sequence listing.txt

Lys Pro Ala Glu Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Pro Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

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

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
225 230 235 240

60571HOW - complete sequence listing.txt

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
385 390 395 400

Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Thr Phe Glu
405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
435 440 445

60571HOW - complete sequence listing.txt

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asp
485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
545 550 555 560

Asp Glu Glu Glu Ile Arg Ala Thr Asn Pro Val Ala Thr Glu Gln Tyr
565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala Ile Ser Asp
580 585 590

Gln Thr Lys His Ala Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr
595 600 605

Gln Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu
610 615 620

Gln Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His
625 630 635 640

Pro Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln
645 650 655

60571HOW - complete sequence listing.txt

Ile Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe
660 665 670

Ser Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln
675 680 685

Val Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg
690 695 700

Trp Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn
705 710 715 720

Val Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro
725 730 735

Ile Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

<210> 7

<211> 2238

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 7

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cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcataaggac	120
gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac	180
aaggagagc cggtaacga ggcagacgcc gcggccctcg agcacgacaa agcctacgac	240
cggcagctcg acagcggaga caaccgtac ctcaagtaca accacgccga cgcggagttt	300
caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag	360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg	420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga	480
aaggcgggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac	540

60571HOW - complete sequence listing.txt

tcagtacctg acccccagcc tctcggacag ccaccagcag cccctcttgg tctgggaact	600
aatacgatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga	660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac	720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt	780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagaggcca cgcagaatga cggtacgacg acgattgcc aataaccttac cagcacggtt	1020
cagggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgcctcccg cgttcccagc agacgtcttc atgggtgccac agtatggata cctcacctg	1140
aacaacggga gtcaggcagt aggacgctct tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccgaaa cagctttacc ttcagctaca cttttgagga cgttcctttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
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cagttttctc aggccggagc gaggtagcatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaaca cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccaca ggacgatgaa gaaaagtttt ttcctcagag cgggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaagg catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcaaag gatcagacaa aaagcaccgc taggcaagca	1800
gctaccgag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat	1860
gtgtaccttc aggggcccac ctgggcaaag attccacaca cggacggaca ttttcacccc	1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac	1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcac	2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac	2100

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agcaaacgct ggaatcccga aattcagtac acttccaact acaacaagtc tattaatgtg 2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gcccattgg caccagatac 2220
ctgactcgta atctgtaa 2238

<210> 8
<211> 745
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically generated sequence

<400> 8

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
1 5 10 15

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
20 25 30

Lys Pro Ala Glu Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

60571HOW - complete sequence listing.txt

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

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

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
340 345 350

60571HOW - complete sequence listing.txt

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
385 390 395 400

Gln Met Leu Arg Thr Gly Asn Ser Phe Thr Phe Ser Tyr Thr Phe Glu
405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
545 550 555 560

60571HOW - complete sequence listing.txt

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala Lys Asp Gln
580 585 590

Thr Lys Ser Thr Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

<210> 9
<211> 2238
<212> DNA

60571HOW - complete sequence listing.txt

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 9

atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga	60
cagtggatgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcataaggac	120
gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac	180
aaggagagc cggatcaacga ggacagcgcc gcggccctcg agcacgacaa agcctacgac	240
cggcagctcg acagcggaga caaccctgac ctcaagtaca accacgccga cgcggagttt	300
caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag	360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg	420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga	480
aaggcgggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac	540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctcttgg tctgggaact	600
aatacgaagg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga	660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac	720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt	780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840
tattttgact tcaacagatt cactgccac ttttcaccac gtgactggca aagactcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagaggtca cgcagaatga cggtagcagc acgattgcca ataaccttac cagcacggtt	1020
cagggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgcctccgc cgttcccagc agacgtcttc atggtgccac agtatggata cctcacctg	1140
aacaacggga gtcaggcagt aggacgctct tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccggaaa caactttacc ttcagctaca cttttgagga cgttcctttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380

60571HOW - complete sequence listing.txt

cagttttctc aggccggagc gagtgacatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acacctgcgg ataacaacaa cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaaggt catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcaaac caagactaca caaaaactgc taggcaagca	1800
gctaccgcag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat	1860
gtgtaccttc agggggcccat ctgggcaaag attccacaca cggacggaca ttttcacccc	1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac	1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcac	2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac	2100
agcaaacgct ggaatcccga aattcagtac acttccaact acaacaagtc tgттаatgtg	2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac	2220
ctgactcgta atctgtaa	2238

<210> 10
 <211> 745
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetically generated sequence

<400> 10

Met	Ala	Ala	Asp	Gly	Tyr	Leu	Pro	Asp	Trp	Leu	Glu	Asp	Thr	Leu	Ser
1				5					10					15	

Glu	Gly	Ile	Arg	Gln	Trp	Trp	Lys	Leu	Lys	Pro	Gly	Pro	Pro	Pro	Pro
			20					25					30		

Lys	Pro	Ala	Glu	Arg	His	Lys	Asp	Asp	Ser	Arg	Gly	Leu	Val	Leu	Pro
		35					40					45			

60571HOW - complete sequence listing.txt

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

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

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

60571HOW - complete sequence listing.txt

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
385 390 395 400

Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Thr Phe Glu
405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
450 455 460

60571HOW - complete sequence listing.txt

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Pro Ala Asp Asn Asn
485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala Asn Gln Asp
580 585 590

Tyr Thr Lys Thr Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
660 665 670

60571HOW - complete sequence listing.txt

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
690 695 700

Asn Pro Glu Val Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

<210> 11
<211> 2238
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetically generated sequence

<400> 11
atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga 60
cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcataaggac 120
gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac 180
aaggagagc cggtcaacga ggcagacgcc gcggccctcg agcacgacaa agcctacgac 240
cggcagctcg acagcggaga caaccgtac ctcaagtaca accacgccga cgcggagttt 300
caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag 360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg 420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga 480
aaggcgggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac 540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctcttgg tctgggaact 600
aatacgatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga 660

60571HOW - complete sequence listing.txt

gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac	720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt	780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagaggta cgcagaatga cggtagcagc acgattgcca ataaccttac cagcacggtt	1020
cagggtgtta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgctcccg cgttcccagc agacgtcttc atgggtgccac agtatggata cctcacctg	1140
aacaacggga gtcaggcagt aggacgctct tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccgaaa caactttacc ttacagctaca cttttgagga cgttccttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgacatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatatgcgg ataacaaca cagtgaatac	1500
tcgtggactg gagctacaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cgggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaagg catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcaatc tccgaccaga caaaacacgc taggcaagca	1800
gctaccgcag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat	1860
gtgtaccttc agggggccat ctgggcaaag attccacaca cggacggaca ttttcacccc	1920
tctcccctca tgggtggatt cggacttaaa caccctctc cccagattct catcaagaac	1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcac	2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac	2100
agcaaacgct ggaatcccga aattcagtag acttccaact acaacaagtc tattaatgtg	2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac	2220

ctgactcgta atctgtaa

2238

<210> 12
 <211> 745
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetically generated sequence

<400> 12

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
 1 5 10 15

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
 20 25 30

Lys Pro Ala Glu Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
 35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
 50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
 65 70 75 80

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
 85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
 100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
 115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
 130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
 145 150 155 160

60571HOW - complete sequence listing.txt

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

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

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
355 360 365

60571HOW - complete sequence listing.txt

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
385 390 395 400

Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Thr Phe Glu
405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Tyr Ala Asp Asn Asn
485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
565 570 575

60571HOW - complete sequence listing.txt

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala Ile Ser Asp
580 585 590

Gln Thr Lys His Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

<210> 13

<211> 2238

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

60571HOW - complete sequence listing.txt

<400> 13

atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga	60
cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagggcg gcataaggac	120
gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac	180
aaggagagc cgggtcaacga ggcagacgcc gcggccctcg agcacgacaa agcctacgac	240
cggcagctcg acagcggaga caacccttac ctcaagtaca accacgccga cgcggagttt	300
caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag	360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg	420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga	480
aaggcgggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac	540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctcttgg tctgggaact	600
aatac gatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga	660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac	720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt	780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagaggta cgcagaatga cggtacgacg acgattgcca ataaccttac cagcacggtt	1020
cagggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgctcccgc cgttcccagc agacgtcttc atggtgccac agtatggata cctcacctg	1140
aacaacggga gtcaggcagt aggacgctct tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccgaaa caactttacc ttcagctaca cttttgagga cgttccttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgacatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaaca cagtgaatac	1500

60571HOW - complete sequence listing.txt

tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaaggt catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcaaac caagactaca caaaaactgc taggcaagca	1800
gctaccgcag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat	1860
gtgtaccttc agggggcccat ctgggcaaag attccacaca cggacggaca ttttcacccc	1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac	1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcatc	2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac	2100
agcaaacgct ggaatcccga aattcagtac acttccaact acaacaagtc tattaatgtg	2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac	2220
ctgactcgta atctgtaa	2238

<210> 14

<211> 745

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 14

Met	Ala	Ala	Asp	Gly	Tyr	Leu	Pro	Asp	Trp	Leu	Glu	Asp	Thr	Leu	Ser
1				5					10					15	

Glu	Gly	Ile	Arg	Gln	Trp	Trp	Lys	Leu	Lys	Pro	Gly	Pro	Pro	Pro	Pro
			20					25						30	

Lys	Pro	Ala	Gly	Arg	His	Lys	Asp	Asp	Ser	Arg	Gly	Leu	Val	Leu	Pro
		35					40					45			

Gly	Tyr	Lys	Tyr	Leu	Gly	Pro	Phe	Asn	Gly	Leu	Asp	Lys	Gly	Glu	Pro
	50					55					60				

60571HOW - complete sequence listing.txt

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

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

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
260 265 270

60571HOW - complete sequence listing.txt

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
385 390 395 400

Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Thr Phe Glu
405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
465 470 475 480

60571HOW - complete sequence listing.txt

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala Asn Gln Asp
580 585 590

Tyr Thr Lys Thr Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
675 680 685

60571HOW - complete sequence listing.txt

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

<210> 15
<211> 2238
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetically generated sequence

<400> 15
atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga 60
cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcataaggac 120
gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac 180
aagggagagc cgggtcaacga ggcagacgcc gcggccctcg agcacgacaa agcctacgac 240
cggcagctcg acagcggaga caacccttac ctcaagtaca accacgccga cgcggagttt 300
caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag 360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg 420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga 480
aaggcgggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac 540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctcttgg tctgggaact 600
aatacgatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga 660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac 720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt 780

60571HOW - complete sequence listing.txt

tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagaggtca cgcagaatga cggtagcagc acgattgccataaaccttac cagcacggtt	1020
caggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgcctccgc cgttcccagc agacgtcttc atggtgccac agtatggata cctcacctg	1140
aacaacggga gtcaggcagt aggacgtctt tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccggaaa caactttacc ttcagctaca cttttgagga cgttcctttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgacatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaacaa cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaaggt catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcaatc tccgaccaga caaaacacgc taggcaagca	1800
gctaccgcag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat	1860
gtgtaccttc aggggcccac ctgggcaaag attccacaca cggacggaca ttttcacccc	1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac	1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcac	2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac	2100
agcaaacgct ggaatcccga aattcagtac acttccaact acaacaagtc tattaatgtg	2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac	2220
ctgactcgta atctgtaa	2238

60571HOW - complete sequence listing.txt

<211> 745

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 16

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
1 5 10 15

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
20 25 30

Lys Pro Ala Glu Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

60571HOW - complete sequence listing.txt

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

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
370 375 380

60571HOW - complete sequence listing.txt

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
385 390 395 400

Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Thr Phe Glu
405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala Ile Ser Asp
580 585 590

60571HOW - complete sequence listing.txt

Gln Thr Lys His Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

<210> 17

<211> 2238

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 17

atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga

60

60571HOW - complete sequence listing.txt

cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcataaggac	120
gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac	180
aaggagagc cgggtcaacga ggcagacgcc gcggccctcg agcacgacaa agcctacgac	240
cggcagctcg acagcggaga caacccttac ctcaagtaca accacgccga cgcggagttt	300
caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag	360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg	420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga	480
aaggcgggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac	540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctctgg tctgggaact	600
aatacgatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga	660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac	720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt	780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagagggtca cgcagaatga cggtagcagc acgattgcc aataaccttac cagcacggtt	1020
cagggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgcctccgc cgttcccagc agacgtcttc atgggtccac agtatggata cctcacctg	1140
aacaacggga gtcaggcagt aggacgtctt tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccgga aagctttacc ttcagctaca cttttgagga cgttcctttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gactgacatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaaca cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttctcagag cggggttctc	1620

60571HOW - complete sequence listing.txt

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atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaaggt catgattaca      1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct      1740
accaacctcc agagaggcaa cctagcacac gacatcacca agaattattgc taggcaagca      1800
gctaccgcag atgtcaacac acaaggcggt cttccaggca tgggtctggca ggacagagat      1860
gtgtaccttc agggggcccat ctgggcaaag attccacaca cggacggaca ttttcacccc      1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac      1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcac      2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac      2100
agcaaacgct ggaatcccga aattcagtac acttccaact acaacaagtc tattaatgtg      2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac      2220
ctgactcgta atctgtaa                                          2238

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<210> 18

<211> 745

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 18

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Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
1           5           10          15

```

```

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
          20          25          30

```

```

Lys Pro Ala Glu Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
          35          40          45

```

```

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
          50          55          60

```

```

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65          70          75          80

```

60571HOW - complete sequence listing.txt

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

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

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
275 280 285

60571HOW - complete sequence listing.txt

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
385 390 395 400

Gln Met Leu Arg Thr Gly Asn Ser Phe Thr Phe Ser Tyr Thr Phe Glu
405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
485 490 495

60571HOW - complete sequence listing.txt

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala His Asp Ile
580 585 590

Thr Lys Asn Ile Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
690 695 700

60571HOW - complete sequence listing.txt

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

<210> 19

<211> 2238

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 19

atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga	60
cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcataaggac	120
gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac	180
aaggagagc cggatcaacga ggcagacgcc gcggccctcg agcacgacaa agcctacgac	240
cggcagctcg acagcggaga caacccttac ctcaagtaca accacgccga cgcggagttt	300
caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag	360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg	420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga	480
aaggcgggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac	540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctcttgg tctgggaact	600
aatacgaatg ctacaggcag tggcgaccca atggcagaca ataacgaggg cgccgacgga	660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac	720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt	780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc	900

60571HOW - complete sequence listing.txt

aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagaggtca cgcagaatga cggtagcagc acgattgcc aataccttac cagcacggtt	1020
caggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgcctcccg cgttcccagc agacgtcttc atggtgccac agtatggata cctcacctg	1140
aacaacggga gtcaggcagt aggacgtctt tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccggaaa cagctttacc ttcagctaca cttttgagga cgttcctttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgacatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaaca cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaaggt catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcacac gacatcacca agaataattgc taggcaagca	1800
gtaccgcag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat	1860
gtgtaccttc aggggcccac ctgggcaaag attccacaca cggacggaca ttttcacccc	1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac	1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcac	2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac	2100
agcaaacgct ggaatcccga aattcagtag acttccaact acaacaagtc tattaatgtg	2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac	2220
ctgactcgta atctgtaa	2238

<210> 20

<211> 745

<212> PRT

<213> Artificial Sequence

60571HOW - complete sequence listing.txt

<220>

<223> synthetically generated sequence

<400> 20

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
1 5 10 15

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
20 25 30

Lys Pro Ala Glu Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

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

60571HOW - complete sequence listing.txt

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
385 390 395 400

60571HOW - complete sequence listing.txt

Gln Met Leu Arg Thr Gly Asn Ser Phe Thr Phe Ser Tyr Thr Phe Glu
405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala His Asp Ile
580 585 590

Thr Lys Asn Ile Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
595 600 605

60571HOW - complete sequence listing.txt

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

<210> 21
<211> 2238
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetically generated sequence

<400> 21
atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga 60
cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcataaggac 120
gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac 180

60571HOW - complete sequence listing.txt

aagggagagc cgggtcaacga cgcagacgcc gcggccctcg agcacgacaa agcctacgac	240
cggcagctcg acagcggaga caacccgtac ctcaagtaca accacgccga cgcggagttt	300
caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag	360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg	420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga	480
aaggcgggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac	540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctcttgg tctgggaact	600
aatacgatgg ctacaggcgg tggcgcacca atggcagaca ataacgaggg cgccgacgga	660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac	720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt	780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagaggcca cgcagaatga cggtagcagc acgattgcc aataaccttac cagcacggtt	1020
cagggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgcctcccg cgttcccagc agacgtcttc atgggtgccac agtatggata cctcacctg	1140
aacaacggga gtcaggcagt aggacgctct tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccgga aagcctttacc ttacagctaca cttttgagga cgttcctttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgacatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaaca cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttctcagag cggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaaggt catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740

60571HOW - complete sequence listing.txt

```

accaacctcc agagaggcaa cctagcacac gacatcacca agaattattgc taggcaagca      1800
gctaccgcag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat      1860
gtgtaccttc agggggcccat ctgggcaaag attccacaca cggacggaca ttttcacccc      1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac      1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcatc      2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac      2100
agcaaacgct ggaatcccga aattcagtac acttccaact acaacaagtc tattaatgtg      2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac      2220
ctgactcgta atctgtaa                                     2238

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<210> 22
 <211> 745
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetically generated sequence

<400> 22

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Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
1           5           10           15

```

```

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
          20           25           30

```

```

Lys Pro Ala Glu Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
          35           40           45

```

```

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
          50           55           60

```

```

Val Asn Asp Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65           70           75           80

```

```

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
          85           90           95

```

60571HOW - complete sequence listing.txt

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

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

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Gly Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
290 295 300

60571HOW - complete sequence listing.txt

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
385 390 395 400

Gln Met Leu Arg Thr Gly Asn Ser Phe Thr Phe Ser Tyr Thr Phe Glu
405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
500 505 510

60571HOW - complete sequence listing.txt

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala His Asp Ile
580 585 590

Thr Lys Asn Ile Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
705 710 715 720

60571HOW - complete sequence listing.txt

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

<210> 23
<211> 2238
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetically generated sequence

<400> 23
atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga 60
cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcataaggac 120
gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac 180
aagggagagc cgggtcaacga ggcagacgcc gcggccctcg agcacgacaa agcctacgac 240
cggcagctcg acagcggaga caacccttac ctcaagtaca accacgccga cgcggagttt 300
caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag 360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg 420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga 480
aaggcgggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac 540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctcttgg tctgggaact 600
aatacgatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga 660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac 720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt 780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg 840
tattttgact tcaacagatt cactgccac ttttcaccac gtgactggca aagactcatc 900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc 960
aaagaggtca cgcagaatga cggtacgacg acgattgcc aataaccttac cagcacggtt 1020

60571HOW - complete sequence listing.txt

caggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgcctcccg cgttcccagc agacgtcttc atggtgccac agtatggata cctcacctg	1140
aacaacggga gtcaggcagt aggacgtctt tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccgaaa cagctttacc ttcagctaca cttttgagga cgttcctttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgacatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaaca cagtgaatac	1500
tcgtggactg gagctacaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccaaa ggacgatgaa gaaaagtttt ttcctcagag cgggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaaggt catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcacac gacatcacca agaataattgc taggcaagca	1800
gtaccgcag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat	1860
gtgtaccttc agggggccat ctgggcaaag attccacaca cggacggaca ttttcacccc	1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac	1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcac	2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac	2100
agcaaacgct ggaatcccga aattcagtac acttccaact acaacaagtc tattaatgtg	2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac	2220
ctgactcgta atctgtaa	2238

<210> 24

<211> 745

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 24

60571HOW - complete sequence listing.txt

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
1 5 10 15

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
20 25 30

Lys Pro Ala Glu Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

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

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly
195 200 205

60571HOW - complete sequence listing.txt

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
385 390 395 400

Gln Met Leu Arg Thr Gly Asn Ser Phe Thr Phe Ser Tyr Thr Phe Glu
405 410 415

60571HOW - complete sequence listing.txt

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala His Asp Ile
580 585 590

Thr Lys Asn Ile Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
610 615 620

60571HOW - complete sequence listing.txt

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

<210> 25
<211> 2238
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetically generated sequence

<400> 25
atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga 60
cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcataaggac 120
gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac 180
aagggagagc cgggtcaacga ggcagacgcc gcggccctcg agcacgacaa agcctacgac 240
cggcagctcg acagcggaga caaccgtac ctcaagtaca accacgccga cgcggagttt 300

60571HOW - complete sequence listing.txt

caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag	360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg	420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga	480
aaggcgggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac	540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctcttgg tctgggagct	600
aatacgatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga	660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac	720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt	780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagaggcca cgcagaatga cggtacgacg acgattgcc aataaccttac cagcacggtt	1020
cagggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgcctccgc cgttcccagc agacgtcttc atggtgccac agtatggata cctcacctg	1140
aacaacggga gtcaggcagt aggacgctct tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccggaaa cagctttacc ttcagctaca cttttgagga cgttcctttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgcatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaaca cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccaca ggacgatgaa gaaaagtttt ttcctcagag cggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaagg catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcaatc tccgaccaga caaacacgc taggcaagca	1800
gctaccgcag atgtcaacac acaaggcgtt cttccaggca tggctctggca ggacagagat	1860

60571HOW - complete sequence listing.txt

```

gtgtaccttc aggggcccac ctgggcaaag attccacaca cggacggaca ttttcacccc      1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac      1980
accccgggtac ctgcgaatcc ttcgaccacc ttcagtcgcg caaagtttgc ttccttcac      2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac      2100
agcaaacgct ggaatcccga aattcagtag acttccaact acaacaagtc tattaatgtg      2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac      2220
ctgactcgta atctgtaa                                                    2238

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<210> 26

<211> 745

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 26

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Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
1           5           10           15

```

```

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
          20           25           30

```

```

Lys Pro Ala Glu Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
          35           40           45

```

```

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
          50           55           60

```

```

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65           70           75           80

```

```

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
          85           90           95

```

```

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
          100          105          110

```

60571HOW - complete sequence listing.txt

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

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

Ala Ala Pro Ser Gly Leu Gly Ala Asn Thr Met Ala Thr Gly Ser Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
305 310 315 320

60571HOW - complete sequence listing.txt

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
385 390 395 400

Gln Met Leu Arg Thr Gly Asn Ser Phe Thr Phe Ser Tyr Thr Phe Glu
405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
515 520 525

60571HOW - complete sequence listing.txt

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala Ile Ser Asp
580 585 590

Gln Thr Lys His Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
725 730 735

60571HOW - complete sequence listing.txt

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

<210> 27
<211> 2238
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetically generated sequence

<400> 27
atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga 60
cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagggcg gcataaggac 120
gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac 180
aaggagagagc cgggtcaacga ggcagacgcc gcggccctcg agcacgacaa agcctacgac 240
cggcagctcg acagcggaga caacccttac ctcaagtaca accacgccga cgcggagttt 300
caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag 360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg 420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga 480
aaggcggggc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac 540
tcagaacctg acccccagcc tctcggacag ccaccagcag cccctcttgg tctgggaact 600
aatacgatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga 660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac 720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt 780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg 840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc 900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc 960
aaagaggtca cgcagaatga cggtagcagc acgattgccataaaccttac cagcacggtt 1020
cagggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga 1080
tgcctccgc cgttcccagc agacgtcttc atggtgccac agtatggata cctcaccctg 1140

60571HOW - complete sequence listing.txt

aacaacggga gtcaggcagt aggacgctct tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccggaaa caactttacc ttcagctaca cttttgagga cgttcctttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgcatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acacctgcgg ataacaaca cagtgaatac	1500
tcgtggactg gagctacaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaagg catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcaaac caagactaca caaaaactgc taggcaagca	1800
gctaccgcag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat	1860
gtgtaccttc agggggccat ctgggcaaag attccacaca cggacggaca ttttcacccc	1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac	1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcac	2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac	2100
agcaaacgct ggaatcccg aattcagtac acttccaact acaacaagtc tattaatgtg	2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac	2220
ctgactcgta atctgtaa	2238

<210> 28

<211> 745

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 28

Met	Ala	Ala	Asp	Gly	Tyr	Leu	Pro	Asp	Trp	Leu	Glu	Asp	Thr	Leu	Ser
1				5					10					15	

60571HOW - complete sequence listing.txt

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
20 25 30

Lys Pro Ala Gly Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ala Asp Ser Glu Pro Asp Pro Gln Pro Leu Gly Gln Pro Pro
180 185 190

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

60571HOW - complete sequence listing.txt

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

60571HOW - complete sequence listing.txt

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Pro Ala Asp Asn Asn
485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala Asn Gln Asp
580 585 590

Tyr Thr Lys Thr Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
625 630 635 640

60571HOW - complete sequence listing.txt

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

<210> 29

<211> 2238

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 29

atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga	60
cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcataaggac	120
gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac	180
aagggagagc cgggtcaacga ggcagacgcc gcggccctcg agcacgacaa agcctacgac	240
cggcagctcg acagcggaga caaccgtac ctcaagtaca accacgccga cgcggagttt	300
caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag	360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg	420

60571HOW - complete sequence listing.txt

ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga	480
aaggcggggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac	540
tcagtacctg accccaggcc tctcggacag ccaccagcag cccctcttgg tctgggaact	600
aatacgatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga	660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcca cagagtcac	720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt	780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagaggcca cgcagaatga cggtagcagc acgattgcca ataaccttac cagcacgggt	1020
cagggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgcctccgc cgttcccagc agacgtcttc atgggtccac agtatggata cctcaccctg	1140
aacgacggga gtcaggcagt aggacgctct tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccgaaa caactttacc ttacgtaca cttttgagga cgttccttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgacatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaacaa cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaaggt catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcaatc tccgaccaga caaaacacgc taggcaagca	1800
gtaccgcaa atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat	1860
gtgtaccttc aggggcccac ctgggcaaag attccacaca cggacggaca ttttcacccc	1920
tctcccctca tgggtggatt cggacttaaa caccctcctc ccagattct catcaagaac	1980

60571HOW - complete sequence listing.txt

accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcac 2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac 2100
agcaaacgct ggaatcccga aattcagtac acttccaact acaacaagtc tattaatgtg 2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac 2220
ctgactcgta atctgtaa 2238

<210> 30

<211> 745

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 30

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
1 5 10 15

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
20 25 30

Lys Pro Ala Glu Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

60571HOW - complete sequence listing.txt

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ala Asp Ser Val Pro Asp Pro Arg Pro Leu Gly Gln Pro Pro
180 185 190

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
325 330 335

60571HOW - complete sequence listing.txt

Thr	Ser	Thr	Val	Gln	Val	Phe	Thr	Asp	Ser	Glu	Tyr	Gln	Leu	Pro	Tyr	340	345	350
Val	Leu	Gly	Ser	Ala	His	Gln	Gly	Cys	Leu	Pro	Pro	Phe	Pro	Ala	Asp	355	360	365
Val	Phe	Met	Val	Pro	Gln	Tyr	Gly	Tyr	Leu	Thr	Leu	Asn	Asp	Gly	Ser	370	375	380
Gln	Ala	Val	Gly	Arg	Ser	Ser	Phe	Tyr	Cys	Leu	Glu	Tyr	Phe	Pro	Ser	385	390	400
Gln	Met	Leu	Arg	Thr	Gly	Asn	Asn	Phe	Thr	Phe	Ser	Tyr	Thr	Phe	Glu	405	410	415
Asp	Val	Pro	Phe	His	Ser	Ser	Tyr	Ala	His	Ser	Gln	Ser	Leu	Asp	Arg	420	425	430
Leu	Met	Asn	Pro	Leu	Ile	Asp	Gln	Tyr	Leu	Tyr	Tyr	Leu	Ser	Arg	Thr	435	440	445
Asn	Thr	Pro	Ser	Gly	Thr	Thr	Thr	Gln	Ser	Arg	Leu	Gln	Phe	Ser	Gln	450	455	460
Ala	Gly	Ala	Ser	Asp	Ile	Arg	Asp	Gln	Ser	Arg	Asn	Trp	Leu	Pro	Gly	465	470	475
Pro	Cys	Tyr	Arg	Gln	Gln	Arg	Val	Ser	Lys	Thr	Ser	Ala	Asp	Asn	Asn	485	490	495
Asn	Ser	Glu	Tyr	Ser	Trp	Thr	Gly	Ala	Thr	Lys	Tyr	His	Leu	Asn	Gly	500	505	510
Arg	Asp	Ser	Leu	Val	Asn	Pro	Gly	Pro	Ala	Met	Ala	Ser	His	Lys	Asp	515	520	525
Asp	Glu	Glu	Lys	Phe	Phe	Pro	Gln	Ser	Gly	Val	Leu	Ile	Phe	Gly	Lys	530	535	540

60571HOW - complete sequence listing.txt

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala Ile Ser Asp
580 585 590

Gln Thr Lys His Ala Arg Gln Ala Ala Thr Ala Asn Val Asn Thr Gln
595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

60571HOW - complete sequence listing.txt

<210> 31
 <211> 2188
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> synthetically generated sequence

<400> 31
 atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga 60
 cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcataaggac 120
 gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac 180
 aagggagagc cgggtcaacga ggcagacgcc gcggccctcg agcacgacaa agcctacgac 240
 cggcagctcg acagcggaga caaccctgac ctcaagtaca accacgccga cgcggagttt 300
 caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag 360
 gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg 420
 ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga 480
 aaggcgggcc agcagcctgc aaaaaaaga ttgaattttg gtcagactgg agacgcagac 540
 tcagtacctg acccccagcc tctcggacag ccaccagcag cccctctgg tctgggaact 600
 aatacgatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga 660
 gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggctgggcga cagagtcac 720
 accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt 780
 tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg 840
 tattttgact acaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc 900
 aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc 960
 aaagaggta cgcagaatga cggtagcagc acgattgccataaaccttac cagcacggtt 1020
 cagggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga 1080
 tgcctcccg cgttcccagc agacgtcttc atgggtgccac agtatggata cctcacctg 1140
 aacaacggga gtcaggcagt aggacgtctt tcattttact gcctggagta ctttccttct 1200
 cagatgctgc gtaccggaac caactttacc ttcagctaca cttttgagga cgttcctttc 1260

60571HOW - complete sequence listing.txt

cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgacatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaacaa cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cgggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaaggt catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcagac caagactaca caaaaactgc taggcaagca	1800
ggacagagat gtgtaccttc aggggcccac ctgggcaaag attccacaca cggacggaca	1860
ttttcacccc tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct	1920
catcaagaac accccgttac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc	1980
ttccttcatac acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca	2040
gaaggaaaac agcaaacgct ggaatcccga aattcagtac acttccaact acaacaagtc	2100
tattaatgtg gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg	2160
caccagatac ctgactcgta atctgtaa	2188

<210> 32

<211> 745

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 32

Met	Ala	Ala	Asp	Gly	Tyr	Leu	Pro	Asp	Trp	Leu	Glu	Asp	Thr	Leu	Ser
1				5					10					15	

Glu	Gly	Ile	Arg	Gln	Trp	Trp	Lys	Leu	Lys	Pro	Gly	Pro	Pro	Pro	Pro
			20					25					30		

Lys	Pro	Ala	Glu	Arg	His	Lys	Asp	Asp	Ser	Arg	Gly	Leu	Val	Leu	Pro
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

60571HOW - complete sequence listing.txt

35

40

45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
 50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
 65 70 75 80

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
 85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
 100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
 115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
 130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
 145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
 165 170 175

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

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly
 195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
 210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Leu Gly Asp Arg Val Ile
 225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu

60571HOW - complete sequence listing.txt
245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Tyr Asn Arg Phe His
275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
385 390 395 400

Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Thr Phe Glu
405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln

60571HOW - complete sequence listing.txt

450

455

460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
 465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
 485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
 500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
 515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
 530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
 545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
 565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala Asp Gln Asp
 580 585 590

Tyr Thr Lys Thr Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
 595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
 610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
 625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
 645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser

60571HOW - complete sequence listing.txt

660

665

670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

<210> 33
<211> 2238
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetically generated sequence

<400> 33
atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga 60
cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcataaggac 120
gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac 180
aagggagagc cgggtcaacga ggcagaggcc gcggccctcg agcacgacaa agcctacgac 240
cggcagctcg acagcggaga caacccttac ctcaagtaca accacgccga cgcggagttt 300
caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag 360
gcgaaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg 420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga 480
aaggcgggccc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac 540
tcagaacctg acccccagcc tctcggacag ccaccagcag cccctcttgg tctgggaact 600

60571HOW - complete sequence listing.txt

aatacgatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga	660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcca cagagtcac	720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt	780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagaggcca cgcagaatga cggtacgacg acgattgccca ataaccttac cagcacggtt	1020
cagggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgcctcccgc cgttcccagc agacgtcttc atgggtgccac agtatggata cctcacctg	1140
aacaacggga gtcaggcagt aggacgtctt tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccggaac cagctttacc ttcagctaca cttttgagga cgttcctttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgacatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaacaa cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cgggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaaggc catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcaatc tccgaccaga caaaacacgc taggcaagca	1800
gtaccgcag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat	1860
gtgtaccttc agggggccat ctgggcaaag attccacaca cggacggaca ttttcacccc	1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac	1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcac	2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac	2100
agcaaacgct ggaatcccga aattcagtac acttccaact acaacaagtc tattaatgtg	2160

60571HOW - complete sequence listing.txt

gactttactg tggacactaa tggcgtgtat tcagagcctc gcccattgg caccagatac 2220
ctgactcgta atctgtaa 2238

<210> 34
<211> 745
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically generated sequence

<400> 34

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
1 5 10 15

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
20 25 30

Lys Pro Ala Glu Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Glu Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly

60571HOW - complete sequence listing.txt

```

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

```

60571HOW - complete sequence listing.txt

355

360

365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
 370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
 385 390 395 400

Gln Met Leu Arg Thr Gly Asn Ser Phe Thr Phe Ser Tyr Thr Phe Glu
 405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
 420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
 435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
 450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
 465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
 485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
 500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
 515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
 530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
 545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr

60571HOW - complete sequence listing.txt
565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala Ile Ser Asp
580 585 590

Gln Thr Lys His Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

<210> 35
<211> 2238
<212> DNA
<213> Artificial Sequence

60571HOW - complete sequence listing.txt

<220>

<223> synthetically generated sequence

<400> 35

atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga	60
cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcataaggac	120
gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac	180
aaggagagc cgggtcaacga ggcagacgcc gcggccctcg agcacgacaa agcctacgac	240
cggcagctcg acagcggaga caacccttac ctcaagtaca accacgccga cgcggagttt	300
caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag	360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg	420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga	480
aaggcgggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac	540
tcagaacctg acccccagcc tctcggacag ccaccagcag cccctcttgg tctgggaact	600
aatacgatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga	660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac	720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt	780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagaggcca cgcagaatga cggtacgacg acgattgcca ataaccttac cagcacggtt	1020
cagggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgcctcccgc cgttcccagc agacgtcttc atggtgccac agtatggata cctcaccctg	1140
aacaacggga gtcaggcagt aggacgtctt tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccgaaa caactttacc ttcagctaca cttttgagga cgttcctttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgcatt cgggaccagt ctaggaactg gcttcctgga	1440

60571HOW - complete sequence listing.txt

```

ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataactacaa cagtgaatac      1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc      1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cgggggttctc      1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaaggt catgattaca      1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct      1740
accaacctcc agagaggcaa cctagcaatc tccgaccaga caaaacacgc taggcaagca      1800
gctaccgcag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat      1860
gtgtaccttc agggggcccat ctgggcaaag attccacaca cggacggaca ttttcacccc      1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac      1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcatc      2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac      2100
agcaaacgct ggaatcccga aattcagtac acttccaact acaacaagtc tattaatgtg      2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac      2220
ctgactcgta atctgtaa                                          2238

```

```

<210> 36
<211> 745
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically generated sequence

<400> 36

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```

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
1           5           10           15

```

```

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
20           25           30

```

```

Lys Pro Ala Glu Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
35           40           45

```

```

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro

```

60571HOW - complete sequence listing.txt

50

55

60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ala Asp Ser Glu Pro Asp Pro Gln Pro Leu Gly Gln Pro Pro
180 185 190

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr

60571HOW - complete sequence listing.txt

260

265

270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
 275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
 290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
 305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
 325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
 340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
 355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
 370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
 385 390 395 400

Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Thr Phe Glu
 405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
 420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
 435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
 450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly

465 470 475 480

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
500 505 510

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
530 535 540

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
565 570 575

Gln Thr Lys His Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
595 600 605

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
625 630 635 640

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
660 665 670

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675

680

685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
 690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
 705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
 725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
 740 745

<210> 37
 <211> 2238
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> synthetically generated sequence

<400> 37
 atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga 60
 cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcataaggac 120
 gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac 180
 aaggagagagc cgggtcaacgc cgcagacgcc gcggccctcg agcacgacaa agcctacgac 240
 cggcagctcg acagcggaga caacccttac ctcaagtaca accacgccga cgcggagttt 300
 caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agccttccag 360
 gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg 420
 ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga 480
 aaggcgggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac 540
 tcaatacctg acccccagcc tctcggacag ccaccagcag cccctctggt tctgggaact 600
 aatacgatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga 660
 gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac 720

60571HOW - complete sequence listing.txt

accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt	780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagaggta cgcagaatga cggtagcagc acgattgcca ataaccttac cagcacggtt	1020
cagggtgtta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgcctccgc cgttcccagc agacgtcttc atggtgccac agtatggata cctcacctg	1140
aacaacggga gtcaggcagt aggacgctct tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccggaaa caactttacc ttcagctaca cttttgagga cgttccttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgcatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaaca cagtgaatac	1500
tcgtggactg gagctacaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccaca ggacgatgaa gaaaagtttt ttcctcagag cggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaagg catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcacag cctgacgcca caaaaaacgc taggcaagca	1800
gctaccgag atgtcaacac acaaggcgtt cttccaggca tggctctggca ggacagagat	1860
gtgtaccttc aggggcccac ctgggcaaag attccacaca cggacggaca ttttcacccc	1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac	1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtgtgc ttccttcac	2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac	2100
agcaaacgct ggaatcccga aattcagtag acttccaact acaacaagtc tattaatgtg	2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac	2220
ctgactcgta atctgtaa	2238

60571HOW - complete sequence listing.txt

<210> 38
 <211> 745
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetically generated sequence

<400> 38

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
 1 5 10 15

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
 20 25 30

Lys Pro Ala Glu Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
 35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
 50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
 65 70 75 80

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
 85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
 100 105 110

Asn Leu Gly Arg Ala Ala Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
 115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
 130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
 145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr

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165 170 175

Gly Asp Ala Asp Ser Ile Pro Asp Pro Gln Pro Leu Gly Gln Pro Pro
180 185 190

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser

60571HOW - complete sequence listing.txt

370

375

380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
 385 390 395 400

Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Thr Phe Glu
 405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
 420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
 435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
 450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
 465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
 485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
 500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
 515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
 530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
 545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
 565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala Gln Pro Asp

60571HOW - complete sequence listing.txt

580

585

590

Ala Thr Lys Asn Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

<210> 39

<211> 2238

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 39

60571HOW - complete sequence listing.txt

atggctgccg atggttatct tccagattgg ctctgtggaca ctctctctga aggaataaga	60
cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcataaggac	120
gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac	180
aaggagagc cggtcaacgc cgagacgcc gcggccctcg agcacgacaa agcctacgac	240
cggcagctcg acagcggaga caaccgtac ctcaagtaca accacgccga cgcggagttt	300
caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag	360
gcgaaaaaga gggttcttga acctctgggc ctgggtgagg aacctgttga gacggctccg	420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga	480
aaggcgggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac	540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctcttgg tctgggaact	600
aatacgatgg ctacaggcgg tggcgcacca atggcagaca ataacgaggg cgccgacgga	660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac	720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt	780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagaggcca cgagaaatga cggtagcagc acgattgcca ataaccttac cagcacgggt	1020
cagggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgctccccgc cgttcccagc agacgtcttc atggtgccac agtatggata cctcacctg	1140
aacaacggga gtcaggcagt aggacgtctt tcattttact gcctggagta ctttcttct	1200
cagatgctgc gtaccggaat caactttacc ttacagctaca cttttgagga cgttcctttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgacatt cgggaccagt ctaggaactg gcttcttgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaacaa cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560

60571HOW - complete sequence listing.txt

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ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cggggttctc      1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaaggt catgattaca      1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct      1740
accaacctcc agagaggcaa cctagcacac gacatcacca agaattattgc taggcaagca      1800
gctaccgcag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat      1860
gtgtaccttc agggggcccat ctgggcaaag attccacaca cggacggaca ttttcacccc      1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac      1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcac      2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac      2100
agcaaacgct ggaatcccgga aattcagtag acttccaact acaacaagtc tattaatgtg      2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac      2220
ctgactcgta atctgtaa                                                    2238

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<210> 40

<211> 745

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 40

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Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Val Asp Thr Leu Ser
1           5           10          15

```

```

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
          20          25          30

```

```

Lys Pro Ala Glu Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
35          40          45

```

```

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50          55          60

```

```

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp

```

60571HOW - complete sequence listing.txt

```

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

```

60571HOW - complete sequence listing.txt

275

280

285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
 290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
 305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
 325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
 340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
 355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
 370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
 385 390 395 400

Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Thr Phe Glu
 405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
 420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
 435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
 450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
 465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn

60571HOW - complete sequence listing.txt
485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala His Asp Ile
580 585 590

Thr Lys Asn Ile Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp

60571HOW - complete sequence listing.txt

690

695

700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
 705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
 725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
 740 745

<210> 41

<211> 2238

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 41

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atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga      60
cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcataaggac      120
gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac      180
aagggagagc cgggtcaacgc cgcagacgcc gcggccctcg agcacgacaa agcctacgac      240
cggcagctcg acagcggaga caacccttac ctcaagtaca accacgccga cgcggagttt      300
caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag      360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg      420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga      480
aaggcgggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac      540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctcttgg tctgggaact      600
aatacgatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga      660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac      720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt      780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg      840

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60571HOW - complete sequence listing.txt

tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagatcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagaggta cgcagaatga cgggtacgacg acgattgccca ataaccttac cagcacggtt	1020
cagggtgttta ctgactcggga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgcctcccgc cgttcccagc agacgtcttc atgggtgccac agtatggata cctcacctg	1140
aacaacggga gtcaggcagt aggacgctct tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccgaaa caactttacc ttcagctaca cttttgagga cgttcctttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgacatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaaca cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaaggt catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agggaggcaa cctagcaaac caagactaca caaaaactgc taggcaagca	1800
gtaccgcag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat	1860
gtgtaccttc aggggcccac ctgggcaaag attccacaca cggacggaca ttttcacccc	1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac	1980
accccggtac ctgcgaatcc ttcgaccacc ttctgtgcgg caaagtttgc ttccttcac	2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac	2100
agcaaacgct ggaatcccga aattcagtac acttccaact acaacaagtc tattaatgtg	2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac	2220
ctgactcgta atctgtaa	2238

<210> 42
 <211> 745
 <212> PRT

60571HOW - complete sequence listing.txt

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 42

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
1 5 10 15

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
20 25 30

Lys Pro Ala Glu Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ala Asp Ser Val Pro Asp Pro Gln Pro Leu Gly Gln Pro Pro

60571HOW - complete sequence listing.txt

180

185

190

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser

60571HOW - complete sequence listing.txt

```

385                               390               395               400

Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Thr Phe Glu
                        405                      410                      415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
                        420                      425                      430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
                        435                      440                      445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
                        450                      455                      460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
465                      470                      475                      480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
                        485                      490                      495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
                        500                      505                      510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
                        515                      520                      525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
                        530                      535                      540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
545                      550                      555                      560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
                        565                      570                      575

Gly Ser Val Ser Thr Asn Leu Gln Gly Gly Asn Leu Ala Asn Gln Asp
                        580                      585                      590

Tyr Thr Lys Thr Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln

```

60571HOW - complete sequence listing.txt

595

600

605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Cys
660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

<210> 43

<211> 2238

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 43

atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga 60

cagtgttgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcataaggac 120

60571HOW - complete sequence listing.txt

gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac	180
aagggagagc cgggtcaacga ggcagacgcc gcggccctcg agcacgacaa agcctacgac	240
cggcagctcg acagcggaga caacccgtac ctcaagtaca accacgccga cgcggagttt	300
caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag	360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg	420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga	480
aaggcgggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac	540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctcttgg tctgggaact	600
aatacgatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga	660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac	720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt	780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagaggcca cgcagaatga cggtagcagc acgattgcc aataaccttac cagcacggtt	1020
cagggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgcctcccgc cgttcccagc agacgtcttc atgggtgccac agtatggata cctcacctg	1140
aacgacggga gtcaggcagt aggacgctct tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccgaaa caactttacc ttcagctaca cttttgagga cgttcctttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgacatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaacaa cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cgggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaaggt catgattaca	1680

60571HOW - complete sequence listing.txt

```

gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct 1740
accaacctcc agagaggcaa cctagcagac caagactaca caaaaactgc taggcaagca 1800
gctaccgcag atgtcaacac acaaggcggt cttccaggca tgggtctggca ggacagagat 1860
gtgtaccttc agggggcccat ctgggcaaag attccacaca cggacggaca ttttcacccc 1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac 1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcatc 2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac 2100
agcaaacgct ggaatcccga aattcagtag acttccaact acaacaagtc tattaatgtg 2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gcccatttgg caccagatac 2220
ctgactcgta atctgtaa 2238

```

<210> 44

<211> 745

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 44

```

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
1           5           10           15

```

```

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
          20           25           30

```

```

Lys Pro Ala Glu Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
          35           40           45

```

```

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
          50           55           60

```

```

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65           70           75           80

```

```

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala

```

60571HOW - complete sequence listing.txt
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

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

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp

60571HOW - complete sequence listing.txt

290

295

300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
 305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
 325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
 340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
 355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asp Gly Ser
 370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
 385 390 395 400

Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Thr Phe Glu
 405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
 420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
 435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
 450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
 465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
 485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly

60571HOW - complete sequence listing.txt

500

505

510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
 515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
 530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
 545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
 565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala Asp Gln Asp
 580 585 590

Tyr Thr Lys Thr Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
 595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
 610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
 625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
 645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
 660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
 675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
 690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val

60571HOW - complete sequence listing.txt

705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

<210> 45
<211> 2238
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetically generated sequence

<400> 45
atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga 60
cagtggatgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcataaggac 120
gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac 180
aaggagagc cggatcaacgc cgcagacgcc gcggccctcg agcacgacaa agcctacgac 240
cggcagctcg acagcggaga caacccttac ctcaagtaca accacgccga cgcggagttt 300
caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag 360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg 420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga 480
aaggcgggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac 540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctcttgg tctgggaact 600
aatacgatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga 660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac 720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt 780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg 840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc 900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc 960

60571HOW - complete sequence listing.txt

aaagaggtca cgcagaatga cggtacgacg acgattgccataaaccttac cagcacggtt	1020
caggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgcctcccg cgttcccagc agacgtcttc atgggtgccac agtatggata cctcacctg	1140
aacaacggga gtcaggcagt aggacgtctt tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccggaac caactttacc ttcagctaca cttttgagga cgttcctttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgcatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaaca cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccaca ggacgatgaa gaaaagtttt ttcctcagag cgggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaagg catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcaaac caagactaca caaaaactgc taggcaagca	1800
gctaccgcag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat	1860
gtgtaccttc aggggcccac ctgggcaaag attccacaca cggacggaca ttttcacccc	1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac	1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcac	2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac	2100
agcaaacgct ggaatcccga aattcagtac acttccaact acaacaagtc tattaatgtg	2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gcccattgg caccagatac	2220
ctgactcgta atctgtaa	2238

<210> 46

<211> 745

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

60571HOW - complete sequence listing.txt

<400> 46

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
1 5 10 15

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
20 25 30

Lys Pro Ala Glu Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

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

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly

60571HOW - complete sequence listing.txt

195

200

205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
 210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
 225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
 245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
 260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
 275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
 290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
 305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
 325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
 340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
 355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
 370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
 385 390 395 400

Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Thr Phe Glu

60571HOW - complete sequence listing.txt
405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala Asn Gln Asp
580 585 590

Tyr Thr Lys Thr Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln

60571HOW - complete sequence listing.txt

610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

<210> 47
<211> 2238
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetically generated sequence

<400> 47
atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga 60
cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagggcg gcataaggac 120
gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac 180
aaggagagc cggtcaacga ggcagacgcc gcggccctcg agcacgacaa agcctacgac 240

60571HOW - complete sequence listing.txt

cggcagctcg acagcggaga caacccgtac ctcaagtaca accacgccga cgcggagttt	300
caggagcggc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag	360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg	420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga	480
aaggcggggc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac	540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctcttgg tctgggaact	600
aatacgatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga	660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcatc	720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt	780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagaggcca cgcagaatga cggtagcagc acgattgcca ataaccttac cagcacggtt	1020
cagggtgtta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgctccccgc cgttcccagc agacgtcttc atggtgccac agtatggata cctcacctg	1140
aacaacggga gtcaggcagt aggacgctct tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccggaaa cagctttacc ttcagctaca cttttgagga cgttcctttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgacatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaacaa cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggg gaatccgggc	1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaaggc catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcagac caagactaca caaaaactgc taggcaagca	1800

60571HOW - complete sequence listing.txt

```

gctaccgcag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat      1860
gtgtaccttc agggggcccat ctgggcaaag attccacaca cggacggaca ttttcacccc      1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac      1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcac      2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac      2100
agcaaacgct ggaatcccga aattcagtac acttccaact acaacaagtc tattaatgtg      2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac      2220
ctgactcgta atctgtaa                                     2238

```

<210> 48

<211> 745

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 48

```

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
1           5           10           15

```

```

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
          20           25           30

```

```

Lys Pro Ala Gly Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
          35           40           45

```

```

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
          50           55           60

```

```

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
          65           70           75           80

```

```

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
          85           90           95

```

```

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly

```

60571HOW - complete sequence listing.txt

100

105

110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
 115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
 130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
 145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
 165 170 175

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

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly
 195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
 210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
 225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
 245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
 260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
 275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
 290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val

60571HOW - complete sequence listing.txt

305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
 325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
 340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
 355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
 370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
385 390 395 400

Gln Met Leu Arg Thr Gly Asn Ser Phe Thr Phe Ser Tyr Thr Phe Glu
 405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
 420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
 435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
 450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
 485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
 500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp

60571HOW - complete sequence listing.txt

515

520

525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
 530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
 545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
 565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala Asp Gln Asp
 580 585 590

Tyr Thr Lys Thr Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
 595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
 610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
 625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
 645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
 660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
 675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
 690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
 705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

<210> 49
<211> 2238
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetically generated sequence

<400> 49
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gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac 180
aagggagagc cgggtcaacga ggcagacgcc gcggccctcg agcacgacaa agcctacgac 240
cggcagctcg acagcggaga caacccttac ctcaagtaca accacgccga cgcggagttt 300
caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag 360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg 420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga 480
aaggcggggc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac 540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctcttgg tctgggaact 600
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gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac 720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt 780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg 840
tattttgact tcaacagatt cactgccac ttttcaccac gtgactggca aagactcatc 900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc 960
aaagaggtca cgcagaatga cggtagacg acgattgccca ataagcttac cagcacggtt 1020
cagggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga 1080

60571HOW - complete sequence listing.txt

tgctccccgc cgttcccagc agacgtcttc atgggtgccac agtatggata cctcacccctg	1140
aacaacggga gtcaggcagt aggacgctct tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccggaac cagctttacc ttcagctaca cttttgagga cgttcctttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgacatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaacaa cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cgggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaaggt catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcaaac caagactaca caaaaactgc taggcaagca	1800
gctaccgcag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat	1860
gtgtaccttc agggggccat ctgggcaaag attccacaca cggacggaca ttttcacccc	1920
tctcccctca tgggttgatt cggacttaaa caccctctc cccagattct catcaagaac	1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcac	2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac	2100
agcaaacgct ggaatcccga aattcagtac acttccaact acaacaagtc tattaatgtg	2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac	2220
ctgactcgta atctgtaa	2238

<210> 50

<211> 745

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 50

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser

60571HOW - complete sequence listing.txt

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

```

60571HOW - complete sequence listing.txt

210

215

220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
 225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
 245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
 260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
 275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
 290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
 305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Lys Leu
 325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
 340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
 355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
 370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
 385 390 395 400

Gln Met Leu Arg Thr Gly Asn Ser Phe Thr Phe Ser Tyr Thr Phe Glu
 405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg

60571HOW - complete sequence listing.txt

420

425

430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
 435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
 450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
 465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
 485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
 500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
 515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
 530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
 545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
 565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala Asn Gln Asp
 580 585 590

Tyr Thr Lys Thr Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
 595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
 610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro

625 630 635 640

60571HOW - complete sequence listing.txt

gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg	420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga	480
aaggcgggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac	540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctcttgg tctgggaact	600
aatacgatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga	660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac	720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt	780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagaggtca cgcagaatga cggtacgacg acgattgcc aataaccttac cagcacggtt	1020
caggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgcctccgc cgttcccagc agacgtcttc atggtgccac agtatggata cctcacctg	1140
aacaacggga gtcaggcagt aggacgctct tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccgaaa cagctttacc ttcagctaca cttttgagga cgttccttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgacatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaaca cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctcttgt gaatccgggc	1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaaggt catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcacac gacatcacca agaataattgc taggcaagca	1800
gtaccgcag atgtcaacac acaaggcgtt cttccaggca tggctctggca ggacagagat	1860
gtgtaccttc aggggcccac ctgggcaaag attccacaca cggacggaca ttttcacccc	1920

60571HOW - complete sequence listing.txt

tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac	1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcac	2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac	2100
agcaaacgct ggaatcccgga aattcagtac acttccaact acaacaagtc tattaatgtg	2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac	2220
ctgactcgta atctgtaa	2238

<210> 52

<211> 745

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 52

Met	Ala	Ala	Asp	Gly	Tyr	Leu	Pro	Asp	Trp	Leu	Glu	Asp	Thr	Leu	Ser
1				5					10					15	

Glu	Gly	Ile	Arg	Gln	Trp	Trp	Lys	Leu	Lys	Pro	Gly	Pro	Pro	Pro	Pro
			20					25					30		

Lys	Pro	Ala	Glu	Arg	His	Lys	Asp	Asp	Ser	Arg	Gly	Leu	Val	Leu	Pro
		35					40					45			

Gly	Tyr	Lys	Tyr	Leu	Gly	Pro	Phe	Asn	Gly	Leu	Asp	Lys	Gly	Glu	Pro
	50					55					60				

Val	Asn	Glu	Ala	Asp	Ala	Ala	Ala	Leu	Glu	His	Asp	Lys	Ala	Tyr	Asp
65					70					75					80

Arg	Gln	Leu	Asp	Ser	Gly	Asp	Asn	Pro	Tyr	Leu	Lys	Tyr	Asn	His	Ala
			85						90					95	

Asp	Ala	Glu	Phe	Gln	Glu	Arg	Leu	Lys	Glu	Asp	Thr	Ser	Phe	Gly	Gly
		100						105					110		

Asn	Leu	Gly	Arg	Ala	Val	Phe	Gln	Ala	Lys	Lys	Arg	Val	Leu	Glu	Pro
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

60571HOW - complete sequence listing.txt

115

120

125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
 130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
 145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
 165 170 175

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

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly
 195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
 210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
 225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
 245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
 260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
 275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
 290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
 305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu

60571HOW - complete sequence listing.txt
325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
385 390 395 400

Gln Met Leu Arg Thr Gly Asn Ser Phe Thr Phe Ser Tyr Thr Phe Glu
405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys

60571HOW - complete sequence listing.txt

530

535

540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
 545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
 565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala His Asp Ile
 580 585 590

Thr Lys Asn Ile Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
 595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
 610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
 625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
 645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
 660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
 675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
 690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
 705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
 725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu

<210> 53
 <211> 2238
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> synthetically generated sequence

<400> 53
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 gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac 180
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 caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag 360
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 aatacgatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga 660
 gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac 720
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 aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc 960
 aaagaggtca cgcagaatga cggtagcagc acgattgcc aataaccttac cagcacggtt 1020
 cagggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga 1080
 tgcctcccg cgttcccagc agacgtcttc atgggtgccac agtatggata cctcaccctg 1140
 aacaacggga gtcaggcagt aggacgtctt tcattttact gcctggagta ctttccttct 1200

60571HOW - complete sequence listing.txt

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cacagcaact acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgcatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaacaa cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaaggc catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcaatc tccgaccaga caaaacacgc taggcaagca	1800
gctaccgcag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat	1860
gtgtaccttc aggggccccat ctgggcaaag attccacaca cggacggaca ttttcacccc	1920
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accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcac	2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac	2100
agcaaacgct ggaatcccga aattcagtac acttccaact acaacaagtc tattaatgtg	2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac	2220
ctgactcgta atctgtaa	2238

<210> 54

<211> 745

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 54

Met	Ala	Ala	Asp	Gly	Tyr	Leu	Pro	Asp	Trp	Leu	Glu	Asp	Thr	Leu	Ser
1				5					10					15	

Glu	Gly	Ile	Arg	Gln	Trp	Trp	Lys	Leu	Lys	Pro	Gly	Pro	Pro	Pro	Pro
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

60571HOW - complete sequence listing.txt

20

25

30

Lys Pro Ala Glu Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
 35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
 50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
 65 70 75 80

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
 85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
 100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
 115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
 130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
 145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
 165 170 175

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

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly
 195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
 210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile

60571HOW - complete sequence listing.txt

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

60571HOW - complete sequence listing.txt

435

440

445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
 450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
 465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
 485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
 500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
 515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
 530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
 545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
 565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala Ile Ser Asp
 580 585 590

Gln Thr Lys His Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
 595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
 610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
 625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile

60571HOW - complete sequence listing.txt
645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

<210> 55
<211> 2238
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetically generated sequence

<400> 55
atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga 60
cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcataaggac 120
gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac 180
aaggagagc cggtcaacga ggcagacgcc gcggccctcg agcacgacaa agcctacgac 240
cggcagctcg acagcggaga caacccttac ctcaagtaca accacgccga cgcggagttt 300
caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag 360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg 420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga 480

60571HOW - complete sequence listing.txt

aaggcgggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac	540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctcttgg tctgggaact	600
aatacgatgg ctacaggcag tggcgcacca atggcagacg ataacgaggg cgccgacgga	660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac	720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt	780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagaggtca cgcagaatga cggtagcagc acgattgccataaaccttac cagcacggtt	1020
cagggtgttta ctgactcggg gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgcctcccg cgttcccagc agacgtcttc atgggtgccac agtatggata cctcacctg	1140
aacaacggga gtcaggcagt aggacgtctt tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccggaaa caactttacc ttcagctaca cttttgagga cgttccttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgacatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaacaa cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cgggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaaggt catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcaatc tccgaccaga caaaacacgc taggcaagca	1800
gctaccgcag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat	1860
gtgtaccttc aggggcccac ctgggcaaag attccacaca cggacggaca ttttcacccc	1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac	1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcac	2040

60571HOW - complete sequence listing.txt

acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac 2100
 agcaaacgct ggaatcccgga aattcagtag acttccaact acaacaagtc tattaatgtg 2160
 gactttactg tggacactaa tggcgtgtat tcagagcctc gcccattgg caccagatac 2220
 ctgactcgta atctgtaa 2238

<210> 56
 <211> 745
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetically generated sequence

<400> 56

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
 1 5 10 15

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
 20 25 30

Lys Pro Ala Glu Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
 35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
 50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
 65 70 75 80

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
 85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
 100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
 115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg

60571HOW - complete sequence listing.txt

130

135

140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
 145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
 165 170 175

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

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly
 195 200 205

Ala Pro Met Ala Asp Asp Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
 210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
 225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
 245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
 260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
 275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
 290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
 305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
 325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr

60571HOW - complete sequence listing.txt

340

345

350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
 355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
 370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
 385 390 395 400

Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Thr Phe Glu
 405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
 420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
 435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
 450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
 465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
 485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
 500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
 515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
 530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr

545 550 555 560

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

60571HOW - complete sequence listing.txt

<211> 2238

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 57

atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga	60
cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcataaggac	120
gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac	180
aaggagagc cggatcaacga ggcagacgcc gcggccctcg agcacgacaa agcctacgac	240
cggcagctcg acagcggaga caacccttac ctcaagtaca accacgccga cgcggagttt	300
caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag	360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg	420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga	480
aaggcgggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac	540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctcttgg tctgggaact	600
aatacgatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga	660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac	720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt	780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagagggtca cgcagaatga cggtagcagc acgattgccataaaccttac cagcacgggtt	1020
cagggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgcctcccg cgttcccagc agacgtcttc atgggtgccac agtatggata cctcaccctg	1140
aacaacggga gtcaggcagt aggacgctct tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccggaac cagctttacc ttcagctaca cttttgagga cgttcctttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320

60571HOW - complete sequence listing.txt

tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgacatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaacaa cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaaggt catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcacac gacatcacca agaataattgc taggcaagca	1800
gctaccgcag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat	1860
gtgtaccttc aggggcccac ctgggcaaag attccacaca cggacggaca ttttcacccc	1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac	1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcac	2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac	2100
agcaaacgct ggaatcccga aattcagtac acttccaact acaacaagtc tattaatgtg	2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac	2220
ctgactcgta atctgtaa	2238

<210> 58

<211> 745

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 58

Met	Ala	Ala	Asp	Gly	Tyr	Leu	Pro	Asp	Trp	Leu	Glu	Asp	Thr	Leu	Ser
1				5					10					15	

Glu	Gly	Ile	Arg	Gln	Trp	Trp	Lys	Leu	Lys	Pro	Gly	Pro	Pro	Pro	Pro
			20					25				30			

Lys	Pro	Ala	Glu	Arg	His	Lys	Asp	Asp	Ser	Arg	Gly	Leu	Val	Leu	Pro
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

60571HOW - complete sequence listing.txt

35

40

45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
 50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
 65 70 75 80

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
 85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
 100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
 115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
 130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
 145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
 165 170 175

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

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly
 195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
 210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
 225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu

60571HOW - complete sequence listing.txt
245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
385 390 395 400

Gln Met Leu Arg Thr Gly Asn Ser Phe Thr Phe Ser Tyr Thr Phe Glu
405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln

60571HOW - complete sequence listing.txt

450

455

460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
 465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
 485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
 500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
 515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
 530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
 545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
 565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala His Asp Ile
 580 585 590

Thr Lys Asn Ile Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
 595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
 610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
 625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
 645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser

60571HOW - complete sequence listing.txt

660

665

670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

<210> 59
<211> 2238
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetically generated sequence

<400> 59
atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga 60
cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcataaggac 120
gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac 180
aagggagagc cgggtcaacgc cgcagacgcc gcggccctcg agcacgacaa agcctacgac 240
cggcagctcg acagcggaga caaccgtac ctcaagtaca accacgccga cgcggagttt 300
caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag 360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg 420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga 480
aaggcgggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac 540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctctgg tctgggaact 600

60571HOW - complete sequence listing.txt

aatacgatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga	660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcca cagagtcac	720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt	780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagaggcca cgcagaatga cggtacgacg acgattgccataaaccttac cagcacggtt	1020
cagggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgcctcccgc cgttcccagc agacgtcttc atgggtgccac agtatggata cctcacctg	1140
aacaacggga gtcaggcagt aggacgtctt tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccggaac cagctttacc ttccagctaca cttttgagga cgttccttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgacatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaaca cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cgggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaaggt catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcagac caagactaca caaaaactgc taggcaagca	1800
gtaccgcag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat	1860
gtgtaccttc agggggccat ctgggcaaag attccacaca cggacggaca ttttcacccc	1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac	1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcac	2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac	2100
agcaaacgct ggaatcccga aattcagtac acttccaact acaacaagtc tattaatgtg	2160

60571HOW - complete sequence listing.txt

gactttactg tggacactaa tggcgtgtat tcagagcctc gcccattgg caccagatac 2220
ctgactcgta atctgtaa 2238

<210> 60
<211> 745
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetically generated sequence

<400> 60

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
1 5 10 15

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
20 25 30

Lys Pro Ala Glu Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly

60571HOW - complete sequence listing.txt

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

```

60571HOW - complete sequence listing.txt

355

360

365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
 370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
 385 390 395 400

Gln Met Leu Arg Thr Gly Asn Ser Phe Thr Phe Ser Tyr Thr Phe Glu
 405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
 420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
 435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
 450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
 465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
 485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
 500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
 515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
 530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
 545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr

60571HOW - complete sequence listing.txt
565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala Asp Gln Asp
580 585 590

Tyr Thr Lys Thr Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

<210> 61
<211> 2238
<212> DNA
<213> Artificial Sequence

60571HOW - complete sequence listing.txt

<220>

<223> synthetically generated sequence

<400> 61

atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga	60
cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcataaggac	120
gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac	180
aaggagagc cgggtcaacga ggcagacgcc gcggccctcg agcacgacaa agcctacgac	240
cggcagctcg acagcggaga caacccttac ctcaagtaca accacgccga cgcggagttt	300
caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag	360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg	420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga	480
aaggcgggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac	540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctcttgg tctgggaact	600
aatacgatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga	660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac	720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt	780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagaggcca cgcagaatga cggtacgacg acgattgcca ataaccttac cagcacggtt	1020
cagggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgcctcccg cgttcccagc agacgtcttc atgggtgccac agtatggata cctcaccctg	1140
aacaacggga gtcaggcagt aggacgtctt tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccgaaa caactttacc ttacgttaca cttttgagga cgttcctttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gactgacatt cgggaccagt ctaggaactg gcttcctgga	1440

60571HOW - complete sequence listing.txt

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ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaacaa cagtgaatac      1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc      1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cgggggttctc      1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaaggt catgattaca      1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct      1740
accaacctcc agagaggcaa cctagcaatc tccgaccaga caaaacacgc taggcaagca      1800
gctaccgcag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat      1860
gtgtaccttc agggggcccat ctgggcaaag attccacaca cggacggaca ttttcacccc      1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac      1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcatc      2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac      2100
agcaaacgct ggaatcccga aattcagtac acttccaact acaacaagtc tattaatgtg      2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac      2220
ctgactcgta atctgtaa                                                    2238

```

<210> 62

<211> 745

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 62

```

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
1           5           10           15

```

```

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
          20           25           30

```

```

Lys Pro Ala Glu Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
          35           40           45

```

```

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro

```

60571HOW - complete sequence listing.txt

50

55

60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

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

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr

60571HOW - complete sequence listing.txt

260

265

270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
 275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
 290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
 305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
 325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
 340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
 355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
 370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
 385 390 395 400

Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Thr Phe Glu
 405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
 420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
 435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
 450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly

60571HOW - complete sequence listing.txt

465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
 485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
 500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
 515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
 530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
 565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala Ile Ser Asp
 580 585 590

Gln Thr Lys His Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
 595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
 610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
 645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
 660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val

60571HOW - complete sequence listing.txt

675

680

685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
 690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
 705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
 725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
 740 745

<210> 63
 <211> 2238
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> synthetically generated sequence

<400> 63
 atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga 60
 cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcttaaggac 120
 gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac 180
 aaggagagc cggtcaacgc cgcagacgcc gcggccctcg agcacgacaa agcctacgac 240
 cggcagctcg acagcggaga caaccgtac ctcaagtaca accacgccga cgcggagttt 300
 caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag 360
 gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg 420
 ggaaaaaaga ggccggtagc ccactctcct gtggagccag actcctcctc gggaaccgga 480
 aaggcgggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac 540
 tcagtacctg acccccagcc tctcggacag ccaccagcag cccctctgg tctgggaact 600
 aatacgatgg ctacaggcgg tggcgcacca atggcagaca ataacgaggg cgccgacgga 660
 gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac 720

60571HOW - complete sequence listing.txt

accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt	780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagaggcca cgcagaatga cggtagcagc acgattgccataaaccttac cagcacgggt	1020
cagggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgcctccgc cgttcccagc agacgtcttc atgggtgccac agtatggata cctcacctg	1140
aacaacggga gtcaggcagt aggacgctct tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccggaaa cagctttacc ttacgtaca cttttgagga cgttccttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gaggtagcatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaaca cagtgaatac	1500
tcgtggactg gagctacaa gtaccacctc aatggcagag actctctggg gaatccgggc	1560
ccggccatgg caagccaca ggacgatgaa gaaaagtttt ttcctcagag cggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaagg catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcacac gacatcacca agaattatgc taggcaagca	1800
gctaccgcag atgtcaacac acaaggcgtt cttccaggca tggctctggca ggacagagat	1860
gtgtaccttc aggggcccac ctgggcaaag attccacaca cggacggaca ttttcacccc	1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac	1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtattgc ttccttcac	2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac	2100
agcaaacgct ggaatcccga aattcagtag acttccaact acaacaagtc tattaatgtg	2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac	2220
ctgactcgta atctgtaa	2238

60571HOW - complete sequence listing.txt

<210> 64
 <211> 745
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetically generated sequence

<400> 64

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
 1 5 10 15

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
 20 25 30

Lys Pro Ala Glu Arg Leu Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
 35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
 50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
 65 70 75 80

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
 85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
 100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
 115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
 130 135 140

Pro Val Ala His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
 145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr

60571HOW - complete sequence listing.txt
165 170 175

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

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Gly Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser

60571HOW - complete sequence listing.txt

370

375

380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
 385 390 395 400

Gln Met Leu Arg Thr Gly Asn Ser Phe Thr Phe Ser Tyr Thr Phe Glu
 405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
 420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
 435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
 450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
 465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
 485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
 500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
 515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
 530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
 545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
 565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala His Asp Ile

60571HOW - complete sequence listing.txt

580

585

590

Thr Lys Asn Ile Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

<210> 65

<211> 2238

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 65

60571HOW - complete sequence listing.txt

atggctgccg atggttatct tccagattgg ctgaggaca ctctctctga aggaataaga	60
cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagggcg gcataaggac	120
gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac	180
aaggagagc cggtcaacga ggcagacgcc gcggccctcg agcacgacaa agcctacgac	240
cggcagctcg acagcggaga caacccttac ctcaagtaca accacgccga cgcggagttt	300
caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag	360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg	420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga	480
aaggcgggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac	540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctcttg tctgggaact	600
aatacgatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga	660
gtgggtaatt cctcgggaga ttggcattgc gattccacat ggatgggcga cagagtcac	720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt	780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagaggcca cgagaaatga cggtagcagc acgattgcca ataaccttac cagcacgggt	1020
cagggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgctccccgc cgttcccagc agacgtcttc atggtgccac agtatggata cctcaccctg	1140
aacaacggga gtcaggcagt aggacgtctt tcattttact gcctggagta ctttcttct	1200
cagatgctgc gtaccggaaa caactttacc ttacgtaca cttttgagga cgttcctttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgacatt cgggaccagt ctaggaactg gcttcttgga	1440
ccctgttacc gccagcagcg agtatcaaag acacctgcgg ataacaacaa cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560

60571HOW - complete sequence listing.txt

```

ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cggggttctc 1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaaggt catgattaca 1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct 1740
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gctaccgcag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat 1860
gtgtaccttc agggggcccat ctgggcaaag attccacaca cggacggaca ttttcacccc 1920
tctcccctca tgggttgatt cggacttaaa caccctcctc cccagattct catcaagaac 1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcac 2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac 2100
agcaaacgct ggaatcccgga aattcagtac acttccaact acaacaagtc tattaatgtg 2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac 2220
ctgactcgta atctgtaa 2238

```

<210> 66

<211> 745

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 66

```

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
1           5           10          15

```

```

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
          20          25          30

```

```

Lys Pro Ala Gly Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
35          40          45

```

```

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50          55          60

```

```

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp

```

60571HOW - complete sequence listing.txt

65		70		75		80
Arg	Gln	Leu	Asp	Ser	Gly	Asp
				85		
					Asn	Pro
					90	
						Leu
						Lys
						Tyr
						Asn
						His
						Ala
Asp	Ala	Glu	Phe	Gln	Glu	Arg
			100			
						Leu
						Lys
						105
						Glu
						Asp
						Thr
						Ser
						Phe
						Gly
						Gly
Asn	Leu	Gly	Arg	Ala	Val	Phe
		115				
						Gln
						120
						Ala
						Lys
						Lys
						Arg
						Val
						125
						Leu
						Glu
						Pro
Leu	Gly	Leu	Val	Glu	Glu	Pro
	130					
						Val
						Lys
						Thr
						Ala
						Pro
						Gly
						Lys
						Lys
						Arg
Pro	Val	Glu	His	Ser	Pro	Val
145					150	
						Glu
						Pro
						Asp
						Ser
						155
						Ser
						Ser
						Gly
						Thr
						Gly
Lys	Ala	Gly	Gln	Gln	Pro	Ala
						Arg
						Lys
						Arg
						170
						Leu
						Asn
						Phe
						Gly
						Gln
						Thr
Gly	Asp	Ala	Asp	Ser	Val	Pro
			180			
						Asp
						Pro
						Gln
						Pro
						Leu
						Gly
						Gln
						Pro
						Pro
Ala	Ala	Pro	Ser	Gly	Leu	Gly
		195				
						Thr
						Asn
						Thr
						Met
						Ala
						Thr
						Gly
						Ser
						Gly
Ala	Pro	Met	Ala	Asp	Asn	Asn
	210					
						Glu
						Gly
						Ala
						Asp
						Gly
						Val
						Gly
						Asn
						Ser
Ser	Gly	Asp	Trp	His	Cys	Asp
225					230	
						Ser
						Thr
						Trp
						Met
						235
						Gly
						Asp
						Arg
						Val
						Ile
Thr	Thr	Ser	Thr	Arg	Thr	Trp
				245		
						Ala
						Leu
						Pro
						Thr
						Tyr
						Asn
						Asn
						His
						Leu
Tyr	Lys	Gln	Ile	Ser	Ser	Gln
			260			
						Ser
						Gly
						Ala
						Ser
						Asn
						Asp
						Asn
						His
						Tyr
Phe	Gly	Tyr	Ser	Thr	Pro	Trp
						Gly
						Tyr
						Phe
						Asp
						Phe
						Asn
						Arg
						Phe
						His

60571HOW - complete sequence listing.txt

275

280

285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
 290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
 305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
 325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
 340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
 355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
 370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
 385 390 395 400

Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Thr Phe Glu
 405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
 420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
 435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
 450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
 465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Pro Ala Asp Asn Asn

60571HOW - complete sequence listing.txt
485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Ser Leu Ala Asn Gln Asp
580 585 590

Tyr Thr Lys Thr Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp

60571HOW - complete sequence listing.txt

690

695

700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
 705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
 725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
 740 745

<210> 67

<211> 2238

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 67

atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga	60
cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagggcg gcataaggac	120
gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac	180
aaggagagagc cgggtcaacgc cgcagacgcc gcggccctcg agcacgacaa agcctacgac	240
cggcagctcg acagcggaga caacccttac ctcaagtaca accacgccga cgcggagttt	300
caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag	360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg	420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga	480
aaggcgggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac	540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctcttgg tctgggaact	600
aatacgatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga	660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac	720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt	780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840

60571HOW - complete sequence listing.txt

tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagatcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagaggcca cgcagaatga cgggtacgacg acgattgccca ataaccttac cagcacgggt	1020
cagggtgttta ctgactcggga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgcctcccg cgttcccagc agacgtcttc atgggtgccac agtatggata cctcacctg	1140
aacaacggga gtcaggcagt aggacgctct tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccgaaa cagctttacc ttcagctaca cttttgagga cgttccttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgacatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaaca cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccaca ggacgatgaa gaaaagtttt ttcctcagag cggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaaggc catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcacac gacatcacca agaataattgc taggcaagca	1800
gtaccgcag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat	1860
gtgtaccttc aggggcccac ctgggcaaag attccacaca cggacggaca ttttcacccc	1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac	1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcac	2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac	2100
agcaaacgct ggaatcccga aattcagtac acttccaact acaacaagtc tattaatgtg	2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac	2220
ctgactcgta atctgtaa	2238

<210> 68
 <211> 745
 <212> PRT

60571HOW - complete sequence listing.txt

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 68

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
1 5 10 15

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
20 25 30

Lys Pro Ala Gly Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

Gly Asp Ala Asp Ser Val Pro Asp Pro Gln Pro Leu Gly Gln Pro Pro

60571HOW - complete sequence listing.txt

180

185

190

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser

60571HOW - complete sequence listing.txt

```

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

```

60571HOW - complete sequence listing.txt

595

600

605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

<210> 69

<211> 2238

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 69

atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga 60

cagtgttgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcataaggac 120

60571HOW - complete sequence listing.txt

ggcagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac	180
aagggagagc cgggtcaacgc cgcagacgcc gcggccctcg agcacgacaa agcctacgac	240
cggcagctcg acagcggaga caacccttac ctcaagtaca accacgccga cgcggagttt	300
caggagcgcc ttgaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag	360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg	420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga	480
aaggcggacc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac	540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctctgg tctgggaact	600
aatacgatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga	660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac	720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt	780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagaggcca cgcagaatga cggtagcagc acgattgccataaaccttac cagcacggtt	1020
cagggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgcctcccgc cgttcccagc agacgtcttc atgggtgccac agtatggata cctcacctg	1140
aacaacggga gtcaggcagt aggacgctct tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccggaac caactttacc ttcagctaca cttttgagga cgttccttct	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgacatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acacctgcgg ataacaacaa cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cgggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaaggt catgattaca	1680

60571HOW - complete sequence listing.txt

```

gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct 1740
accaacctcc agagaggcaa cctagcaaac caagactaca caaaaactgc taggcaagca 1800
gctaccgcag atgtcaacac acaaggcggt cttccaggca tgggtctggca ggacagagat 1860
gtgtaccttc agggggcccat ctgggcaaag attccacaca cggacggaca ttttcacccc 1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac 1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcac 2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac 2100
agcaaacgct ggaatcccga aattcagtag acttccaact acaacaagtc tattaatgtg 2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gcccatttgg caccagatac 2220
ctgactcgta atctgtaa 2238

```

<210> 70

<211> 745

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 70

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Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
1           5           10           15

```

```

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
          20           25           30

```

```

Lys Pro Ala Glu Arg His Lys Asp Gly Ser Arg Gly Leu Val Leu Pro
          35           40           45

```

```

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
          50           55           60

```

```

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65           70           75           80

```

```

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala

```

Asp Ala Glu Phe Gln Glu Arg Leu Glu Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
145 150 155 160

Lys Ala Asp Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

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

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly
195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp

60571HOW - complete sequence listing.txt

290

295

300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
 305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
 325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
 340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
 355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
 370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
 385 390 395 400

Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Thr Phe Glu
 405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
 420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
 435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
 450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
 465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Pro Ala Asp Asn Asn
 485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly

60571HOW - complete sequence listing.txt

500

505

510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala Asn Gln Asp
580 585 590

Tyr Thr Lys Thr Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val

60571HOW - complete sequence listing.txt

705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

<210> 71
<211> 2238
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetically generated sequence

<400> 71
atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga 60
cagtggatgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcataaggac 120
gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac 180
aaggagagc cggatcaacga ggcagacgcc gcggccctcg agcacgacaa agcctacgac 240
cggcagctcg acagcggaga caacccttac ctcaagtaca accacgccga cgcggagttt 300
caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag 360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg 420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga 480
aaggcgggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac 540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctcttgg tctgggaact 600
aatacgatgg ctacaggcag tggcgcacca atggcagaca ataacgaggg cgccgacgga 660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac 720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt 780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg 840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc 900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc 960

60571HOW - complete sequence listing.txt

aaagaggtca cgcagaatga cggtacgacg acgattgccataaaccttac cagcacggtt	1020
caggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgcctcccg cgttcccagc agacgtcttc atgggtgccac agtatggata cctcacctg	1140
aacaacggga gtcaggcagt aggacgtctt tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccggaac caactttacc ttcagctaca cttttgagga cgttcctttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgcatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaaca cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccaca ggacgatgaa gaaaagtttt ttcctcagag cgggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaagg catgattaca	1680
gacgaagagg aaatcagggc aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcagac caagactaca caaaaactgc taggcaagca	1800
gctaccgcag atgtcaacac acaaggcgtt cttccaggca tggctctggca ggacagagat	1860
gtgtaccttc agggggcccat ctgggcaaag attccacaca cggacggaca ttttcacccc	1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac	1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcac	2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac	2100
agcaaacgct ggaatcccga aattcagtac acttccaact acaacaagtc tattaatgtg	2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gcccattgg caccagatac	2220
ctgactcgta atctgtaa	2238

<210> 72

<211> 745

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

60571HOW - complete sequence listing.txt

<400> 72

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
1 5 10 15

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Pro Pro Pro Pro
20 25 30

Lys Pro Ala Glu Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
35 40 45

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
50 55 60

Val Asn Glu Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65 70 75 80

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
85 90 95

Asp Ala Glu Phe Gln Glu Arg Leu Lys Glu Asp Thr Ser Phe Gly Gly
100 105 110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
165 170 175

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

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Ser Gly

60571HOW - complete sequence listing.txt

195

200

205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
 210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
 225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
 245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
 260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
 275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
 290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
 305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
 325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
 340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
 355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
 370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
 385 390 395 400

Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Thr Phe Glu

60571HOW - complete sequence listing.txt
405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
545 550 555 560

Asp Glu Glu Glu Ile Arg Ala Thr Asn Pro Val Ala Thr Glu Gln Tyr
565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala Asp Gln Asp
580 585 590

Tyr Thr Lys Thr Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln

60571HOW - complete sequence listing.txt

610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

<210> 73
<211> 2238
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetically generated sequence

<400> 73
atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga 60
cagtgggtgga agctcaaacc tggcgcacca ccaccaaagc ccgcagagcg gcataaggac 120
gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac 180
aagggagagc cgggtcaacgc cgcagacgcc gcggccctcg agcacgacaa agcctacgac 240

60571HOW - complete sequence listing.txt

cggcagctcg acagcggaga caacccttac ctcaagtaca accacgccga cgcggagttt	300
caggagcgcc ttgaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag	360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg	420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga	480
aaggcgggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac	540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctcttgg tctgggaact	600
aatac gatgg ctacaggcgg tggcgacca atggcagaca ataacgaggg cgccgacgga	660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac	720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt	780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagaggcca cgcagaatga cggtagcagc acgattgcca ataaccttac cagcacggtt	1020
cagggtgtta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgctcccgc cgttcccagc agacgtcttc atggtgccac agtatggata cctcacctg	1140
aacaacggga gtcaggcagt aggacgctct tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccggaaa caactttacc ttcagctaca cttttgagga cgttccttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgacatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaaca cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaagg catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcacag cctgacgcca caaaaaacgc taggcaagca	1800

60571HOW - complete sequence listing.txt

```

gctaccgcag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat      1860
gtgtaccttc agggggcccat ctgggcaaag attccacaca cggacggaca ttttcacccc      1920
tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac      1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcac      2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac      2100
agcaaacgct ggaatcccga aattcagtac acttccaact acaacaagtc tattaatgtg      2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac      2220
ctgactcgta atctgtaa                                     2238

```

<210> 74

<211> 745

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 74

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Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser
1           5           10           15

```

```

Glu Gly Ile Arg Gln Trp Trp Lys Leu Lys Pro Gly Ala Pro Pro Pro
          20           25           30

```

```

Lys Pro Ala Glu Arg His Lys Asp Asp Ser Arg Gly Leu Val Leu Pro
          35           40           45

```

```

Gly Tyr Lys Tyr Leu Gly Pro Phe Asn Gly Leu Asp Lys Gly Glu Pro
          50           55           60

```

```

Val Asn Ala Ala Asp Ala Ala Ala Leu Glu His Asp Lys Ala Tyr Asp
65           70           75           80

```

```

Arg Gln Leu Asp Ser Gly Asp Asn Pro Tyr Leu Lys Tyr Asn His Ala
          85           90           95

```

```

Asp Ala Glu Phe Gln Glu Arg Leu Glu Glu Asp Thr Ser Phe Gly Gly

```

60571HOW - complete sequence listing.txt

100

105

110

Asn Leu Gly Arg Ala Val Phe Gln Ala Lys Lys Arg Val Leu Glu Pro
 115 120 125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
 130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
 145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
 165 170 175

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

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Gly Gly
 195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
 210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
 225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
 245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
 260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
 275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
 290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val

60571HOW - complete sequence listing.txt

305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
 325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
 340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
 355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
 370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
385 390 395 400

Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Thr Phe Glu
 405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
 420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
 435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
 450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
 485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
 500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp

60571HOW - complete sequence listing.txt

515

520

525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
 530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
 545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
 565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala Gln Pro Asp
 580 585 590

Ala Thr Lys Asn Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
 595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
 610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
 625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
 645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
 660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
 675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
 690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
 705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
740 745

<210> 75
<211> 2238
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetically generated sequence

<400> 75
atggctgccg atggttatct tccagattgg ctgaggaca ctctctctga aggaataaga 60
cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcataaggac 120
gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac 180
aagggagagc cgggtcaacga ggcagacgcc gcggccctcg agcacgacaa agcctacgac 240
cggcagctcg acagcggaga caacccttac ctcaagtaca accacgccga cgcggagttt 300
caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag 360
gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg 420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga 480
aaggcggggc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac 540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctcttgg tctgggaact 600
aatacgatgg ctacaggcag tggcgacca atggcagaca ataacgaggg cgccgacgga 660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac 720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt 780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg 840
tattttgact tcaacagatt cactgccac ttttcaccac gtgactggca aagactcatc 900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc 960
aaagaggtca cgcagaatga cggtagacg acgattgcca ataaccttac cagcacggtt 1020
caggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga 1080

60571HOW - complete sequence listing.txt

tgctccccgc cgttcccagc agacgtcttc atgggtccac agtatggata cctcacctct	1140
aacaacggga gtcaggcagt aggacgtctt tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccggaaa caactttacc tttagctaca cttttgagga cgttcctttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgacatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acatctgcgg ataacaacaa cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaaggt catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcaaag gatcagacaa aaagcaccgc taggcaagca	1800
gtaccgcag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat	1860
gtgtaccttc agggggccat ctgggcaaag attccacaca cggacggaca ttttcacccc	1920
tctcccctca tgggttgatt cggacttaaa caccctcctc cccagattct catcaagaac	1980
accccggtac ctgcgaatcc ttcgaccacc tttagtgagg caaagtttgc ttccttcac	2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac	2100
agcaaacgct ggaatcccga aattcagtac acttccaact acaacaagtc tattaatgtg	2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac	2220
ctgactcgta atctgtaa	2238

<210> 76

<211> 745

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 76

Met Ala Ala Asp Gly Tyr Leu Pro Asp Trp Leu Glu Asp Thr Leu Ser

60571HOW - complete sequence listing.txt

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

```

60571HOW - complete sequence listing.txt

210

215

220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
 225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
 245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
 260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
 275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
 290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
 305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu
 325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
 340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
 355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
 370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
 385 390 395 400

Gln Met Leu Arg Thr Gly Asn Asn Phe Thr Phe Ser Tyr Thr Phe Glu
 405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg

60571HOW - complete sequence listing.txt

420

425

430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
 435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
 450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
 465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Ser Ala Asp Asn Asn
 485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
 500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
 515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys
 530 535 540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
 545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
 565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala Lys Asp Gln
 580 585 590

Thr Lys Ser Thr Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
 595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
 610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro

60571HOW - complete sequence listing.txt

625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
 645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
 660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
 675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
 690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
 725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu
 740 745

<210> 77

<211> 2238

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 77

atggctgccg atggttatct tccagattgg ctcgaggaca ctctctctga aggaataaga 60

cagtgggtgga agctcaaacc tggcccacca ccaccaaagc ccgcagagcg gcataaggac 120

gacagcaggg gtcttgtgct tcctgggtac aagtacctcg gacccttcaa cggactcgac 180

aagggagagc cgggtcaacgc cgcagacgcc gcggccctcg agcacgacaa agcctacgac 240

cggcagctcg acagcggaga caaccgtac ctcaagtaca accacgccga cgcggagttt 300

caggagcgcc ttaaagaaga tacgtctttt gggggcaacc tcggacgagc agtcttccag 360

60571HOW - complete sequence listing.txt

gcgaaaaaga gggttcttga acctctgggc ctggttgagg aacctgttaa gacggctccg	420
ggaaaaaaga ggccggtaga gcactctcct gtggagccag actcctcctc gggaaccgga	480
aaggcgggcc agcagcctgc aagaaaaaga ttgaattttg gtcagactgg agacgcagac	540
tcagtacctg acccccagcc tctcggacag ccaccagcag cccctcttg tctgggaact	600
aatacgatgg ctacaggcgg tggcgcacca atggcagaca ataacgaggg cgccgacgga	660
gtgggtaatt cctcgggaaa ttggcattgc gattccacat ggatgggcga cagagtcac	720
accaccagca cccgaacctg ggccctgccc acctacaaca accacctcta caaacaatt	780
tccagccaat caggagcctc gaacgacaat cactactttg gctacagcac cccttggggg	840
tattttgact tcaacagatt ccactgccac ttttcaccac gtgactggca aagactcatc	900
aacaacaact ggggattccg acccaagaga ctcaacttca agctctttaa cattcaagtc	960
aaagaggtca cgcagaatga cggtacgacg acgattgcc aataaccttac cagcacggtt	1020
caggtgttta ctgactcgga gtaccagctc ccgtacgtcc tcggctcggc gcatcaagga	1080
tgctcccgc cgttcccagc agacgtcttc atggtgccac agtatggata cctcacctg	1140
aacaacggga gtcaggcagt aggacgctct tcattttact gcctggagta ctttccttct	1200
cagatgctgc gtaccgaaa cagctttacc ttcagctaca cttttgagga cgttccttc	1260
cacagcagct acgctcacag ccagagtctg gaccgtctca tgaatcctct catcgaccag	1320
tacctgtatt acttgagcag aacaaacact ccaagtggaa ccaccacgca gtcaaggctt	1380
cagttttctc aggccggagc gagtgacatt cgggaccagt ctaggaactg gcttcctgga	1440
ccctgttacc gccagcagcg agtatcaaag acacctgcgg ataacaaca cagtgaatac	1500
tcgtggactg gagctaccaa gtaccacctc aatggcagag actctctggt gaatccgggc	1560
ccggccatgg caagccacaa ggacgatgaa gaaaagtttt ttcctcagag cggggttctc	1620
atctttggga agcaaggctc agagaaaaca aatgtggaca ttgaaaagg catgattaca	1680
gacgaagagg aaatcaggac aaccaatccc gtggctacgg agcagtatgg ttctgtatct	1740
accaacctcc agagaggcaa cctagcaaac caagactaca caaaaactgc taggcaagca	1800
gtaccgcag atgtcaacac acaaggcggt cttccaggca tggctctggca ggacagagat	1860
gtgtaccttc aggggcccac ctgggcaaag attccacaca cgacggaca ttttcacccc	1920

60571HOW - complete sequence listing.txt

tctcccctca tgggtggatt cggacttaaa caccctcctc cccagattct catcaagaac	1980
accccggtac ctgcgaatcc ttcgaccacc ttcagtgcgg caaagtttgc ttccttcac	2040
acacagtact ccacgggaca ggtcagcgtg gagatcgagt gggagctgca gaaggaaaac	2100
agcaaacgct ggaatcccgga aattcagtac acttccaact acaacaagtc tattaatgtg	2160
gactttactg tggacactaa tggcgtgtat tcagagcctc gccccattgg caccagatac	2220
ctgactcgta atctgtaa	2238

<210> 78

<211> 745

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 78

Met	Ala	Ala	Asp	Gly	Tyr	Leu	Pro	Asp	Trp	Leu	Glu	Asp	Thr	Leu	Ser
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Glu	Gly	Ile	Arg	Gln	Trp	Trp	Lys	Leu	Lys	Pro	Gly	Pro	Pro	Pro	Pro
			20					25					30		

Lys	Pro	Ala	Glu	Arg	His	Lys	Asp	Asp	Ser	Arg	Gly	Leu	Val	Leu	Pro
		35					40					45			

Gly	Tyr	Lys	Tyr	Leu	Gly	Pro	Phe	Asn	Gly	Leu	Asp	Lys	Gly	Glu	Pro
	50					55					60				

Val	Asn	Ala	Ala	Asp	Ala	Ala	Ala	Leu	Glu	His	Asp	Lys	Ala	Tyr	Asp
65					70					75					80

Arg	Gln	Leu	Asp	Ser	Gly	Asp	Asn	Pro	Tyr	Leu	Lys	Tyr	Asn	His	Ala
				85					90					95	

Asp	Ala	Glu	Phe	Gln	Glu	Arg	Leu	Lys	Glu	Asp	Thr	Ser	Phe	Gly	Gly
			100					105						110	

Asn	Leu	Gly	Arg	Ala	Val	Phe	Gln	Ala	Lys	Lys	Arg	Val	Leu	Glu	Pro
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

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115

120

125

Leu Gly Leu Val Glu Glu Pro Val Lys Thr Ala Pro Gly Lys Lys Arg
 130 135 140

Pro Val Glu His Ser Pro Val Glu Pro Asp Ser Ser Ser Gly Thr Gly
 145 150 155 160

Lys Ala Gly Gln Gln Pro Ala Arg Lys Arg Leu Asn Phe Gly Gln Thr
 165 170 175

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

Ala Ala Pro Ser Gly Leu Gly Thr Asn Thr Met Ala Thr Gly Gly Gly
 195 200 205

Ala Pro Met Ala Asp Asn Asn Glu Gly Ala Asp Gly Val Gly Asn Ser
 210 215 220

Ser Gly Asn Trp His Cys Asp Ser Thr Trp Met Gly Asp Arg Val Ile
 225 230 235 240

Thr Thr Ser Thr Arg Thr Trp Ala Leu Pro Thr Tyr Asn Asn His Leu
 245 250 255

Tyr Lys Gln Ile Ser Ser Gln Ser Gly Ala Ser Asn Asp Asn His Tyr
 260 265 270

Phe Gly Tyr Ser Thr Pro Trp Gly Tyr Phe Asp Phe Asn Arg Phe His
 275 280 285

Cys His Phe Ser Pro Arg Asp Trp Gln Arg Leu Ile Asn Asn Asn Trp
 290 295 300

Gly Phe Arg Pro Lys Arg Leu Asn Phe Lys Leu Phe Asn Ile Gln Val
 305 310 315 320

Lys Glu Val Thr Gln Asn Asp Gly Thr Thr Thr Ile Ala Asn Asn Leu

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325 330 335

Thr Ser Thr Val Gln Val Phe Thr Asp Ser Glu Tyr Gln Leu Pro Tyr
340 345 350

Val Leu Gly Ser Ala His Gln Gly Cys Leu Pro Pro Phe Pro Ala Asp
355 360 365

Val Phe Met Val Pro Gln Tyr Gly Tyr Leu Thr Leu Asn Asn Gly Ser
370 375 380

Gln Ala Val Gly Arg Ser Ser Phe Tyr Cys Leu Glu Tyr Phe Pro Ser
385 390 395 400

Gln Met Leu Arg Thr Gly Asn Ser Phe Thr Phe Ser Tyr Thr Phe Glu
405 410 415

Asp Val Pro Phe His Ser Ser Tyr Ala His Ser Gln Ser Leu Asp Arg
420 425 430

Leu Met Asn Pro Leu Ile Asp Gln Tyr Leu Tyr Tyr Leu Ser Arg Thr
435 440 445

Asn Thr Pro Ser Gly Thr Thr Thr Gln Ser Arg Leu Gln Phe Ser Gln
450 455 460

Ala Gly Ala Ser Asp Ile Arg Asp Gln Ser Arg Asn Trp Leu Pro Gly
465 470 475 480

Pro Cys Tyr Arg Gln Gln Arg Val Ser Lys Thr Pro Ala Asp Asn Asn
485 490 495

Asn Ser Glu Tyr Ser Trp Thr Gly Ala Thr Lys Tyr His Leu Asn Gly
500 505 510

Arg Asp Ser Leu Val Asn Pro Gly Pro Ala Met Ala Ser His Lys Asp
515 520 525

Asp Glu Glu Lys Phe Phe Pro Gln Ser Gly Val Leu Ile Phe Gly Lys

60571HOW - complete sequence listing.txt

530

535

540

Gln Gly Ser Glu Lys Thr Asn Val Asp Ile Glu Lys Val Met Ile Thr
 545 550 555 560

Asp Glu Glu Glu Ile Arg Thr Thr Asn Pro Val Ala Thr Glu Gln Tyr
 565 570 575

Gly Ser Val Ser Thr Asn Leu Gln Arg Gly Asn Leu Ala Asn Gln Asp
 580 585 590

Tyr Thr Lys Thr Ala Arg Gln Ala Ala Thr Ala Asp Val Asn Thr Gln
 595 600 605

Gly Val Leu Pro Gly Met Val Trp Gln Asp Arg Asp Val Tyr Leu Gln
 610 615 620

Gly Pro Ile Trp Ala Lys Ile Pro His Thr Asp Gly His Phe His Pro
 625 630 635 640

Ser Pro Leu Met Gly Gly Phe Gly Leu Lys His Pro Pro Pro Gln Ile
 645 650 655

Leu Ile Lys Asn Thr Pro Val Pro Ala Asn Pro Ser Thr Thr Phe Ser
 660 665 670

Ala Ala Lys Phe Ala Ser Phe Ile Thr Gln Tyr Ser Thr Gly Gln Val
 675 680 685

Ser Val Glu Ile Glu Trp Glu Leu Gln Lys Glu Asn Ser Lys Arg Trp
 690 695 700

Asn Pro Glu Ile Gln Tyr Thr Ser Asn Tyr Asn Lys Ser Ile Asn Val
 705 710 715 720

Asp Phe Thr Val Asp Thr Asn Gly Val Tyr Ser Glu Pro Arg Pro Ile
 725 730 735

Gly Thr Arg Tyr Leu Thr Arg Asn Leu

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<400> 79
 acgcggaagc ttcgatcaac tacgcag

27

<210> 80
 <211> 32
 <212> DNA
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<220>
 <223> synthetically generated sequence

<400> 80
 agaccaaagt tcaactgaaa cgaattaaac gg

32

<210> 81
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetically generated sequence

<400> 81

Leu Ala Ile Ser Asp Gln Thr Lys His Ala
 1 5 10

<210> 82
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
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<400> 82

Leu Ala Lys Asp Gln Thr Lys Ser Thr Ala

1 5 10

<210> 83
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
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<400> 83

Leu Ala Asn Gln Asp Tyr Thr Lys Thr Ala
1 5 10

<210> 84
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
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<400> 84

Leu Ala His Asp Ile Thr Lys Asn Ile Ala
1 5 10

<210> 85
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
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<400> 85

Leu Ala Asp Gln Asp Tyr Thr Lys Thr Ala
1 5 10

<210> 86
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
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60571HOW - complete sequence listing.txt

<400> 86

Leu Ala Gln Pro Asp Ala Thr Lys Asn Ala
1 5 10

<210> 87

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 87

caccgcaagg gcgaggaggt catca

25

<210> 88

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 88

aaactgatga cctcctcgcc cttgc

25

<210> 89

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 89

caccgtggag ggctccatga acggcc

26

<210> 90

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetically generated sequence

<400> 90

aaacggccgt tcattggagcc ctccac 26

<210> 91
<211> 26
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<220>
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<400> 91
caccgaggac ggcggccact acctgg 26

<210> 92
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
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<400> 92
aaaccaggt agtggccgcc gtcctc 26

<210> 93
<211> 26
<212> DNA
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<220>
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<400> 93
caccgacaac aacatggccg tcatca 26

<210> 94
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aaactgatga cggccatgtt gttgtc 26

<210> 95

60571HOW - complete sequence listing.txt

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 <400> 95
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 <210> 96
 <211> 27
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 <400> 96
 aaaccaggt agtggccgcc gtccttc 27

 <210> 97
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 <212> DNA
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 <400> 97
 caccgacaac aacatggccg tcatca 26

 <210> 98
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 <400> 98
 aaactgatga cggccatgtt gttgtc 26

 <210> 99
 <211> 25
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60571HOW - complete sequence listing.txt

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<220>
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<210> 100
<211> 25
<212> DNA
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<220>
<223> synthetically generated sequence

<400> 100
aaacaccgcc aagctgaagg tgacc                                     25

<210> 101
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetically generated sequence

<400> 101
caccgccgta catgaactgg gggga                                     25

<210> 102
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetically generated sequence

<400> 102
aaactccccc cagttcatgt acgg                                     24

<210> 103
<211> 26
<212> DNA
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<220>
<223> synthetically generated sequence

<400> 103

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caccgtcttg taatcgggga tgtcgg 26

<210> 104
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetically generated sequence

<400> 104
aaacccgaca tccccgatta caagac 26

<210> 105
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetically generated sequence

<400> 105
caccgccgtc ctgcagggag gagtc 25

<210> 106
<211> 25
<212> DNA
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<220>
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<400> 106
aaacgactcc tccctgcagg acggc 25

<210> 107
<211> 10
<212> PRT
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<220>
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<220>
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<222> (3)..(4)
<223> Xaa can be any naturally occurring amino acid

60571HOW - complete sequence listing.txt

<220>
 <221> misc_feature
 <222> (6)..(6)
 <223> Xaa can be any naturally occurring amino acid

<220>
 <221> misc_feature
 <222> (9)..(9)
 <223> Xaa can be any naturally occurring amino acid

<400> 107

Leu	Ala	Xaa	Xaa	Asp	Xaa	Thr	Lys	Xaa	Ala
1				5					10

<210> 108
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> synthetically generated sequence

<220>
 <221> misc_feature
 <222> (3)..(3)
 <223> Xaa can be any naturally occurring amino acid

<220>
 <221> misc_feature
 <222> (5)..(5)
 <223> Xaa can be any naturally occurring amino acid

<220>
 <221> misc_feature
 <222> (8)..(9)
 <223> Xaa can be any naturally occurring amino acid

<400> 108

Leu	Ala	Xaa	Asp	Xaa	Thr	Lys	Xaa	Xaa	Ala
1				5					10