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SEQUENCE LISTING

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SUZHOU TRANSCENTA THERAPEUTICS CO., LTD.

<120> METHOD OF TREATING DISEASES USING GREMLIN1 ANTAGONISTS

<130> 063694-8007W003

<150> PCT/CN2021/080142

<151> 2021-03-11

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<151> 2022-02-16

<160> 75

<170> PatentIn version 3.5

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Thr Val Lys Ile Ser Cys Lys Thr Ser Gly Ser Thr Phe Thr Thr Tyr
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Gly Met Ala Trp Met Lys Gln Ala Pro Gly Lys Gly Leu Thr Trp Met
 35 40 45

Gly Trp Ile Asn Thr Leu Ser Gly Glu Pro Thr Tyr Ala Asp Asp Phe
 50 55 60

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

Leu Gln Ile Asn Asn Leu Lys Asn Glu Asp Ala Ala Thr Tyr Phe Cys
 85 90 95

Ala Arg Glu Pro Met Asp Tyr Trp Gly Gln Gly Thr Ser Val Ile Val
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Ser Ser

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

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

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

Ser Arg Val Glu Ala Glu Asp Leu Gly Ile Tyr Tyr Cys Trp Gln Gly
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Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Asp Tyr
 20 25 30

Tyr Met Asn Trp Leu Lys Gln Ser His Gly Lys Ser Leu Glu Trp Ile
 35 40 45

Gly Asp Ile Asn Pro Lys Asp Gly Asp Ser Gly Tyr Ser His Lys Phe
 50 55 60

Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr
 65 70 75 80

Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
 85 90 95

Ala Ser Gly Phe Thr Thr Val Val Ala Arg Gly Asp Tyr Trp Gly Gln
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Gly Thr Thr Leu Thr Val Ser Ser
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Asp Val Val Met Thr Gln Thr Pro Leu Thr Leu Ser Val Thr Ile Gly
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Asp Gly Lys Thr Tyr Leu Asn Trp Leu Leu Gln Arg Pro Gly Gln Ser
 35 40 45

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

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

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

Thr His Phe Pro Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
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Asp Asp Tyr Met His
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Trp Ile Asp Pro Glu Asn Gly Asp Thr Glu Tyr Ala Ser Lys Phe Gln
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Gly

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Trp Ala Thr Val Pro Asp Phe Asp Tyr
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Lys Ser Ser Gln Ser Leu Leu Asn Arg Ser Asn Gln Lys Asn Tyr Leu
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Phe Thr Ser Thr Arg Glu Ser
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Gln Gln His Tyr Ser Thr Pro Phe Thr
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Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly Ala
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Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp Asp
20 25 30

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

Gly Trp Ile Asp Pro Glu Asn Gly Asp Thr Glu Tyr Ala Ser Lys Phe
50 55 60

Gln Gly Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr
65 70 75 80

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

Thr Thr Trp Ala Thr Val Pro Asp Phe Asp Tyr Trp Gly Gln Gly Thr
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Thr Leu Thr Val Ser Ser
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Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Ala Met Ser Val Gly
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Gln Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Asn Arg
 20 25 30

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

Ser Pro Lys Leu Leu Val His Phe Thr Ser Thr Arg Glu Ser Gly Val
 50 55 60

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

Ile Ser Asn Leu Gln Ala Glu Asp Leu Ala Asp Tyr Phe Cys Gln Gln
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His Tyr Ser Thr Pro Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile
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Asp Phe Tyr Met Asn
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Asp Ile Asn Pro Asn Asn Gly Gly Thr Ser Tyr Asn Gln Lys Phe Lys
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Gly

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Asp Pro Ile Tyr Tyr Asp Tyr Asp Glu Val Ala Tyr
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Arg Ser Ser Gln Ser Leu Val His Ser Asn Gly Asn Thr Tyr Leu His
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Lys Val Ser Asn Arg Phe Ser
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Ser Gln Ser Thr His Val Pro Leu Thr
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Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
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Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Phe
20 25 30

Tyr Met Asn Trp Val Lys Gln Ser His Gly Lys Ser Leu Glu Trp Ile
35 40 45

Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ser Tyr Asn Gln Lys Phe
50 55 60

Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp Pro Ile Tyr Tyr Asp Tyr Asp Glu Val Ala Tyr Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ala
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Asp Gln Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val His Ser
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Asn Gly Asn Thr Tyr Leu His Trp Tyr Leu Gln Lys Pro Gly Gln Ser
 35 40 45

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

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

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

Thr His Val Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
 100 105 110

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Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Thr Tyr
 20 25 30

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

Gly Trp Ile Asn Thr Leu Ser Gly Glu Pro Thr Tyr Ala Asp Asp Phe
 50 55 60

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

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

Ala Arg Glu Pro Met Asp Tyr Trp Gly Gln Gly Thr Met Val Thr Val
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Ser Ser

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Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Thr Tyr
20 25 30

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

Gly Trp Ile Asn Thr Leu Ser Gly Glu Pro Thr Tyr Ala Asp Asp Phe
50 55 60

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

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

Ala Arg Glu Pro Met Asp Tyr Trp Gly Gln Gly Thr Met Val Thr Val
100 105 110

Ser Ser

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Ser Val Lys Val Ser Cys Lys Ala Ser Gly Ser Thr Phe Thr Thr Tyr
 20 25 30

Gly Met Ala Trp Met Lys Gln Ala Pro Gly Gln Gly Leu Thr Trp Met
 35 40 45

Gly Trp Ile Asn Thr Leu Ser Gly Glu Pro Thr Tyr Ala Asp Asp Phe
 50 55 60

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

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

Ala Arg Glu Pro Met Asp Tyr Trp Gly Gln Gly Thr Met Val Thr Val
 100 105 110

Ser Ser

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<400> 47

Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly
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Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu Asp Ser
20 25 30

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

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

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

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

Ala His Phe Pro Leu Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
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<210> 48
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Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly
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Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu Asp Ser
20           25           30

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

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

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

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

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

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 ctgcagcaga gaccaggaca gtctcctaga agactgatct ccctggtgtc taagctggat 180
 tccggagtgc cagatagatt ttccggatct ggatctggca ccgattttac cctgaagatc 240
 tctagagtgg aggcagaaga cgtggggagtg tactattgtt ggcagggagc tcacttcctt 300
 ctgacatttg gacagggaac aaagctggag atcaag 336

<210> 51
 <211> 120
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 51

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

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

Tyr Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Asp Ile Asn Pro Lys Asp Gly Asp Ser Gly Tyr Ser His Lys Phe
 50 55 60

Lys Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80

Gly Thr Thr Val Thr Val Ser Ser
115 120

<220>
<223> Synthetic

<210>	53
<211>	120
<212>	PRT
<213>	Artificial Sequence

<220>
<223> Synthetic

<400> 53

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Asp Tyr

Tyr Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met

35

40

45

Gly Asp Ile Asn Pro Lys Asp Gly Asp Ser Gly Tyr Ser His Lys Phe
 50 55 60

Lys Gly Arg Val Thr Met Thr Val Asp Lys Ser Thr Ser Thr Val Tyr
 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

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

Gly Thr Thr Val Thr Val Ser Ser
 115 120

<210> 54
 <211> 360
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 54
 caagttcagc tgggtgcagtc cggagccgag gtgaagaagc ccggcgcttc cgtgaaggtg 60
 tcttgtaagg cctccggcta ctccttcacc gattactaca tgaactgggt gaggcaagct 120
 cccggtcaag gtctggagtg gatgggac atcaaccca aggacggcga ctccggctat 180
 tcccacaagt tcaagggtcg tgtgaccatg accgtggaca agtccaccag caccgtgtac 240
 atggagctgt cctctttaag gtccgaggac accgccgtgt actactgcgc cagcggattc 300
 accaccgtgg tggctagggg cgactattgg ggccaaggta ccaccgtgac agtgtccagc 360

<210> 55
 <211> 120
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 55

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

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

Tyr Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Asp Ile Asn Pro Lys Asp Gly Asp Ser Gly Tyr Ser His Lys Phe
 50 55 60

Lys Gly Arg Val Thr Leu Thr Val Asp Lys Ser Thr Ser Thr Val Tyr
 65 70 75 80

Met Glu Leu Arg Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

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

Gly Thr Thr Val Thr Val Ser Ser
 115 120

<210> 56

<211> 360

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 56

caagctcagc tgggtgcagtc cggcgctgag gtgaaaaagc ccggcgccag cgtgaaggtg 60

tcttgtaagg cctccggcta ctccttcacc gactactaca tgaactgggt gaggcaagct 120

cccgggtcaag gtctggagtg gatgggcgac atcaacccca aggacggcga cagcggctac 180

tcccacaagt tcaagggtcg tgtgacttta accgtggaca agtccacctc caccgtctac 240

atggagctga ggtctttaag gtccgaggat accgccgtgt actactgcgc tagcggcttc 300

accaccgtgg tggctcgtgg cgattactgg ggacaaggta ccaccgtgac cgtgtcctcc

360

<210> 57
 <211> 120
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 57

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

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

Tyr Met Asn Trp Leu Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45

Gly Asp Ile Asn Pro Lys Asp Gly Asp Ser Gly Tyr Ser His Lys Phe
 50 55 60

Lys Gly Arg Ala Thr Leu Thr Val Asp Lys Ser Thr Ser Thr Val Tyr
 65 70 75 80

Met Glu Leu Arg Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

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

Gly Thr Thr Val Thr Val Ser Ser
 115 120

<210> 58
 <211> 360
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 58
 caagctcaac tgggtgcagtc cggcgccgag gtgaaaaagc ccggtgcctc cgtgaagggtg 60
 agctgcaagg cctccggcta ctcttttacc gactactaca tgaactggct gaggcaagct 120
 cccgggtcaag gtctggagtg gatcggcgat atcaacccca aggacggcga ctccggctac 180
 agccataagt tcaagggtcg tgccacttta accgtggaca agtccaccag caccgtgtac 240
 atggagctga ggtctttaag gtccgaggac accgccgtgt actactgcgc ctccggcttc 300
 accacagtgg tggctcgtgg cgactattgg ggccaaggta ccaccgtgac cgtgagctcc 360

<210> 59
 <211> 112
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 59

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

Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu Asp Ser
 20 25 30

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

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

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

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

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

<210> 60

<211> 336
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 60
 gatgtggtga tgacacagtc tcctctgtct ctgccagtga cactgggaca gccagcttct 60
 atctcttgca agtcctctca gtctctgctg gattccgacg gaaagaccta cctgaattgg 120
 ctgcagcaga gaccaggaca gtctcctaga agactgatct acctggtgtc caagctggat 180
 tctggagtgc cagatagatt ttccggctcc ggctctggca cagatttcac cctgaagatc 240
 tctagagtgg aggagaaga cgtggggagtg tactattgtt ggcaggggaac ccacttcct 300
 tacacatttg gaggaggcac aaaggtggag atcaag 336

<210> 61
 <211> 112
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 61

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

Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu Asp Ser
 20 25 30

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

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

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

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

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

<210> 62
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 62
gatgtggtga tgacacagtc tcctctgtct ctgccagtga cactgggaca gccagcttct 60
atctcttgca agtcctctca gtctctgctg gattccgacg gaaagaccta cctgaattgg 120
ctgcagcaga gaccaggaca gtctcctaga agactgatct acctggtgtc caagctggat 180
tctggattcc cagatagatt ttccggctcc ggctctggca cagatttcac cctgaagatc 240
tctagagtgg aggagaaga cgtgggagtg tactattgtt ggcagggaac ccacttcct 300
tacacatttg gaggaggcac aaaggtggag atcaag 336

<210> 63
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 63

Asn Ser Phe Tyr Ile Pro Arg His Ile Arg Lys Glu Glu Gly Ser Phe
1 5 10 15

Gln Ser Cys Ser Phe
20

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

<220>
<223> Synthetic

<400> 64

Phe Ser Tyr Ser Val Pro Asn Thr Phe Pro Gln Ser Thr Glu Ser Leu
1 5 10 15

Val His Cys Asp Ser
20

<210> 65

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 65

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Gly Val His
1 5 10 15

Ser

<210> 66

<211> 184

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 66

Met Ser Arg Thr Ala Tyr Thr Val Gly Ala Leu Leu Leu Leu Gly
1 5 10 15

Thr Leu Leu Pro Ala Ala Glu Gly Lys Lys Lys Gly Ser Gln Gly Ala
20 25 30

Ile Pro Pro Pro Asp Lys Ala Gln His Asn Asp Ser Glu Gln Thr Gln
35 40 45

Ser Pro Gln Gln Pro Gly Ser Arg Asn Arg Gly Arg Gly Gln Gly Arg
50 55 60

Gly Thr Ala Met Pro Gly Glu Glu Val Leu Glu Ser Ser Gln Glu Ala
65 70 75 80

Leu His Val Thr Glu Arg Lys Tyr Leu Lys Arg Asp Trp Cys Lys Thr
85 90 95

Gln Pro Leu Lys Gln Thr Ile His Glu Glu Gly Cys Asn Ser Arg Thr
100 105 110

Ile Ile Asn Arg Phe Cys Tyr Gly Gln Cys Asn Ser Phe Tyr Ile Pro
115 120 125

Arg His Ile Arg Lys Glu Glu Gly Ser Phe Gln Ser Cys Ser Phe Cys
130 135 140

Lys Pro Lys Lys Phe Thr Thr Met Met Val Thr Leu Asn Cys Pro Glu
145 150 155 160

Leu Gln Pro Pro Thr Lys Lys Lys Arg Val Thr Arg Val Lys Gln Cys
165 170 175

Arg Cys Ile Ser Ile Asp Leu Asp
180

<210> 67
<211> 184
<212> PRT
<213> Artificial Sequence

<220>
<223> Synhtetic

<400> 67

Met Asn Arg Thr Ala Tyr Thr Val Gly Ala Leu Leu Leu Leu Leu Gly
1 5 10 15

Thr Leu Leu Pro Thr Ala Glu Gly Lys Lys Lys Gly Ser Gln Gly Ala
20 25 30

Ile Pro Pro Pro Asp Lys Ala Gln His Asn Asp Ser Glu Gln Thr Gln

35

40

45

Ser Pro Pro Gln Pro Gly Ser Arg Thr Arg Gly Arg Gly Gln Gly Arg
 50 55 60

Gly Thr Ala Met Pro Gly Glu Glu Val Leu Glu Ser Ser Gln Glu Ala
 65 70 75 80

Leu His Val Thr Glu Arg Lys Tyr Leu Lys Arg Asp Trp Cys Lys Thr
 85 90 95

Gln Pro Leu Lys Gln Thr Ile His Glu Glu Gly Cys Asn Ser Arg Thr
 100 105 110

Ile Ile Asn Arg Phe Cys Tyr Gly Gln Cys Asn Ser Phe Tyr Ile Pro
 115 120 125

Arg His Ile Arg Lys Glu Glu Gly Ser Phe Gln Ser Cys Ser Phe Cys
 130 135 140

Lys Pro Lys Lys Phe Thr Thr Met Met Val Thr Leu Asn Cys Pro Glu
 145 150 155 160

Leu Gln Pro Pro Thr Lys Lys Lys Arg Val Thr Arg Val Lys Gln Cys
 165 170 175

Arg Cys Ile Ser Ile Asp Leu Asp
 180

<210> 68

<211> 184

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 68

Met Ser Arg Thr Ala Tyr Thr Val Gly Ala Leu Leu Leu Leu Leu Gly
 1 5 10 15

Thr Leu Leu Pro Ala Ala Glu Gly Lys Lys Lys Gly Ser Gln Gly Ala
 20 25 30

Ile Pro Pro Pro Asp Lys Ala Gln His Asn Asp Ser Glu Gln Thr Gln
 35 40 45

Ser Pro Gln Gln Pro Gly Ser Arg Asn Arg Gly Arg Gly Gln Gly Arg
 50 55 60

Gly Thr Ala Met Pro Gly Glu Glu Val Leu Glu Ser Ser Gln Glu Ala
 65 70 75 80

Leu His Val Thr Glu Arg Lys Tyr Leu Lys Arg Asp Trp Cys Lys Thr
 85 90 95

Gln Pro Leu Lys Gln Thr Ile His Glu Glu Gly Cys Asn Ser Arg Thr
 100 105 110

Ile Ile Asn Arg Phe Cys Tyr Gly Gln Cys Phe Ser Tyr Ser Val Pro
 115 120 125

Asn Thr Phe Pro Gln Ser Thr Glu Ser Leu Val His Cys Asp Ser Cys
 130 135 140

Lys Pro Lys Lys Phe Thr Thr Met Met Val Thr Leu Asn Cys Pro Glu
 145 150 155 160

Leu Gln Pro Pro Thr Lys Lys Lys Arg Val Thr Arg Val Lys Gln Cys
 165 170 175

Arg Cys Ile Ser Ile Asp Leu Asp
 180

<210> 69
 <211> 160
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 69

Lys Lys Lys Gly Ser Gln Gly Ala Ile Pro Pro Pro Asp Lys Ala Gln
1 5 10 15

His Asn Asp Ser Glu Gln Thr Gln Ser Pro Gln Gln Pro Gly Ser Arg
20 25 30

Asn Arg Gly Arg Gly Gln Gly Arg Gly Thr Ala Met Pro Gly Glu Glu
35 40 45

Val Leu Glu Ser Ser Gln Glu Ala Leu His Val Thr Glu Arg Lys Tyr
50 55 60

Leu Lys Arg Asp Trp Cys Lys Thr Gln Pro Leu Lys Gln Thr Ile His
65 70 75 80

Glu Glu Gly Cys Asn Ser Arg Thr Ile Ile Asn Arg Phe Cys Tyr Gly
85 90 95

Gln Cys Asn Ser Phe Tyr Ile Pro Arg His Ile Arg Lys Glu Glu Gly
100 105 110

Ser Phe Gln Ser Cys Ser Phe Cys Lys Pro Lys Lys Phe Thr Thr Met
115 120 125

Met Val Thr Leu Asn Cys Pro Glu Leu Gln Pro Pro Thr Lys Lys Lys
130 135 140

Arg Val Thr Arg Val Lys Gln Cys Arg Cys Ile Ser Ile Asp Leu Asp
145 150 155 160

<210> 70
<211> 160
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 70

Lys Lys Lys Gly Ser Gln Gly Ala Ile Pro Pro Pro Asp Lys Ala Gln
1 5 10 15

His Asn Asp Ser Glu Gln Thr Gln Ser Pro Pro Gln Pro Gly Ser Arg
20 25 30

Thr Arg Gly Arg Gly Gln Gly Arg Gly Thr Ala Met Pro Gly Glu Glu
35 40 45

Val Leu Glu Ser Ser Gln Glu Ala Leu His Val Thr Glu Arg Lys Tyr
50 55 60

Leu Lys Arg Asp Trp Cys Lys Thr Gln Pro Leu Lys Gln Thr Ile His
65 70 75 80

Glu Glu Gly Cys Asn Ser Arg Thr Ile Ile Asn Arg Phe Cys Tyr Gly
85 90 95

Gln Cys Asn Ser Phe Tyr Ile Pro Arg His Ile Arg Lys Glu Glu Gly
100 105 110

Ser Phe Gln Ser Cys Ser Phe Cys Lys Pro Lys Lys Phe Thr Thr Met
115 120 125

Met Val Thr Leu Asn Cys Pro Glu Leu Gln Pro Pro Thr Lys Lys Lys
130 135 140

Arg Val Thr Arg Val Lys Gln Cys Arg Cys Ile Ser Ile Asp Leu Asp
145 150 155 160

<210> 71
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 71

Met Ser Arg Thr Ala Tyr Thr Val Gly Ala Leu Leu Leu Leu Gly
1 5 10 15

Thr Leu Leu Pro Ala Ala Glu Gly

20

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

<220>
 <223> Synthetic

<400> 72

Met Asn Arg Thr Ala Tyr Thr Val Gly Ala Leu Leu Leu Leu Leu Gly
 1 5 10 15

Thr Leu Leu Pro Thr Ala Glu Gly
 20

<210> 73
 <211> 393
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 73

Met Glu Glu Pro Gln Ser Asp Pro Ser Val Glu Pro Pro Leu Ser Gln
 1 5 10 15

Glu Thr Phe Ser Asp Leu Trp Lys Leu Leu Pro Glu Asn Asn Val Leu
 20 25 30

Ser Pro Leu Pro Ser Gln Ala Met Asp Asp Leu Met Leu Ser Pro Asp
 35 40 45

Asp Ile Glu Gln Trp Phe Thr Glu Asp Pro Gly Pro Asp Glu Ala Pro
 50 55 60

Arg Met Pro Glu Ala Ala Pro Pro Val Ala Pro Ala Pro Ala Ala Pro
 65 70 75 80

Thr Pro Ala Ala Pro Ala Pro Ala Pro Ser Trp Pro Leu Ser Ser Ser
 85 90 95

Val Pro Ser Gln Lys Thr Tyr Gln Gly Ser Tyr Gly Phe Arg Leu Gly
100 105 110

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

Ala Leu Asn Lys Met Phe Cys Gln Leu Ala Lys Thr Cys Pro Val Gln
130 135 140

Leu Trp Val Asp Ser Thr Pro Pro Pro Gly Thr Arg Val Arg Ala Met
145 150 155 160

Ala Ile Tyr Lys Gln Ser Gln His Met Thr Glu Val Val Arg Arg Cys
165 170 175

Pro His His Glu Arg Cys Ser Asp Ser Asp Gly Leu Ala Pro Pro Gln
180 185 190

His Leu Ile Arg Val Glu Gly Asn Leu Arg Val Glu Tyr Leu Asp Asp
195 200 205

Arg Asn Thr Phe Arg His Ser Val Val Val Pro Tyr Glu Pro Pro Glu
210 215 220

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

Ser Cys Met Gly Gly Met Asn Arg Arg Pro Ile Leu Thr Ile Ile Thr
245 250 255

Leu Glu Asp Ser Ser Gly Asn Leu Leu Gly Arg Asn Ser Phe Glu Val
260 265 270

Arg Val Cys Ala Cys Pro Gly Arg Asp Arg Arg Thr Glu Glu Glu Asn
275 280 285

Leu Arg Lys Lys Gly Glu Pro His His Glu Leu Pro Pro Gly Ser Thr
290 295 300

Lys Arg Ala Leu Pro Asn Asn Thr Ser Ser Ser Pro Gln Pro Lys Lys
305 310 315 320

Lys Pro Leu Asp Gly Glu Tyr Phe Thr Leu Gln Ile Arg Gly Arg Glu
325 330 335

Arg Phe Glu Met Phe Arg Glu Leu Asn Glu Ala Leu Glu Leu Lys Asp
340 345 350

Ala Gln Ala Gly Lys Glu Pro Gly Gly Ser Arg Ala His Ser Ser His
355 360 365

Leu Lys Ser Lys Lys Gly Gln Ser Thr Ser Arg His Lys Lys Leu Met
370 375 380

Phe Lys Thr Glu Gly Pro Asp Ser Asp
385 390

<210> 74
<211> 399
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 74

Met Thr Ala Ile Ile Lys Glu Ile Val Ser Arg Asn Lys Arg Arg Tyr
1 5 10 15

Gln Glu Asp Gly Phe Asp Leu Asp Leu Thr Tyr Ile Tyr Pro Asn Ile
20 25 30

Ile Ala Met Gly Phe Pro Ala Glu Arg Leu Glu Gly Val Tyr Arg Asn
35 40 45

Asn Ile Asp Asp Val Val Arg Phe Leu Asp Ser Lys His Lys Asn His
50 55 60

Tyr Lys Ile Tyr Asn Leu Cys Ala Glu Arg His Tyr Asp Thr Ala Lys
65 70 75 80

Asn Cys Arg Val Ala Gln Tyr Pro Phe Glu Asp His Asn Pro Pro Gln
85 90 95

Leu Glu Leu Ile Lys Pro Phe Cys Glu Asp Leu Asp Gln Trp Leu Ser
100 105 110

Glu Asp Asp Asn His Val Ala Ala Ile His Cys Lys Ala Gly Lys Gly
115 120 125

Arg Thr Gly Val Met Ile Cys Ala Tyr Leu Leu Arg Gly Lys Phe Leu
130 135 140

Lys Ala Gln Glu Ala Leu Asp Phe Tyr Gly Glu Val Arg Thr Arg Asp
145 150 155 160

Lys Lys Gly Val Thr Ile Pro Ser Arg Arg Tyr Val Tyr Tyr Tyr Ser
165 170 175

Tyr Leu Leu Lys Asn His Leu Asp Tyr Arg Pro Val Ala Leu Leu Phe
180 185 190

His Lys Met Met Phe Glu Thr Ile Pro Met Phe Ser Gly Gly Thr Cys
195 200 205

Asn Pro Gln Phe Val Val Cys Gln Leu Lys Val Lys Ile Tyr Ser Ser
210 215 220

Asn Ser Gly Pro Thr Arg Arg Glu Asp Lys Phe Met Tyr Phe Glu Phe
225 230 235 240

Pro Gln Pro Leu Pro Val Cys Gly Asp Ile Lys Val Glu Phe Phe His
245 250 255

Lys Asn Lys Met Leu Lys Lys Asp Lys Met Phe His Phe Trp Val Asn
260 265 270

Thr Phe Phe Ile Pro Gly Pro Glu Glu Thr Ser Glu Lys Val Glu Asn
275 280 285

Gly Ser Leu Cys Asp Gln Glu Ile Asp Ser Ile Cys Ser Ile Glu Arg
 290 295 300

Ala Asp Asn Asp Lys Glu Tyr Leu Val Leu Thr Leu Thr Lys Asn Asp
 305 310 315 320

Leu Asp Lys Ala Asn Lys Asp Lys Ala Asn Arg Tyr Phe Ser Pro Asn
 325 330 335

Phe Lys Val Lys Leu Tyr Phe Thr Lys Thr Val Glu Glu Pro Ser Asn
 340 345 350

Pro Glu Ala Ser Ser Ser Thr Ser Val Thr Pro Asp Val Ser Asp Asn
 355 360 365

Glu Pro Asp His Tyr Arg Tyr Ser Asp Thr Thr Asp Ser Asp Pro Glu
 370 375 380

Asn Glu Pro Phe Asp Glu Asp Gln His Thr Gln Ile Thr Lys Val
 385 390 395

<210> 75
 <211> 820
 <212> PRT
 <213> Homo sapiens

<400> 75

Ser Trp Lys Cys Leu Leu Phe Trp Ala Val Leu Val Thr Ala Thr Leu
 1 5 10 15

Cys Thr Ala Arg Pro Ser Pro Thr Leu Pro Glu Gln Ala Gln Pro Trp
 20 25 30

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

Leu Gln Leu Arg Cys Arg Leu Arg Asp Asp Val Gln Ser Ile Asn Trp
 50 55 60

Leu Arg Asp Gly Val Gln Leu Ala Glu Ser Asn Arg Thr Arg Ile Thr

80

85

100

115

130

145

165

180

195

210

225

245

260

275

Lys His Ile Glu Val Asn Gly Ser Lys Ile Gly Pro Asp Asn Leu Pro
 290 295 300

Tyr Val Gln Ile Leu Lys Thr Ala Gly Val Asn Thr Thr Asp Lys Glu
 305 310 315 320

Met Glu Val Leu His Leu Arg Asn Val Ser Phe Glu Asp Ala Gly Glu
 325 330 335

Tyr Thr Cys Leu Ala Gly Asn Ser Ile Gly Leu Ser His His Ser Ala
 340 345 350

Trp Leu Thr Val Leu Glu Ala Leu Glu Glu Arg Pro Ala Val Met Thr
 355 360 365

Ser Pro Leu Tyr Leu Glu Ile Ile Ile Tyr Cys Thr Gly Ala Phe Leu
 370 375 380

Ile Ser Cys Met Val Gly Ser Val Ile Val Tyr Lys Met Lys Ser Gly
 385 390 395 400

Thr Lys Lys Ser Asp Phe His Ser Gln Met Ala Val His Lys Leu Ala
 405 410 415

Lys Ser Ile Pro Leu Arg Arg Gln Val Thr Val Ser Ala Asp Ser Ser
 420 425 430

Ala Ser Met Asn Ser Gly Val Leu Leu Val Arg Pro Ser Arg Leu Ser
 435 440 445

Ser Ser Gly Thr Pro Met Leu Ala Gly Val Ser Glu Tyr Glu Leu Pro
 450 455 460

Glu Asp Pro Arg Trp Glu Leu Pro Arg Asp Arg Leu Val Leu Gly Lys
 465 470 475 480

Pro Leu Gly Glu Gly Cys Phe Gly Gln Val Val Leu Ala Glu Ala Ile
 485 490 495

Gly Leu Asp Lys Asp Lys Pro Asn Arg Val Thr Lys Val Ala Val Lys
 500 505 510

Met Leu Lys Ser Asp Ala Thr Glu Lys Asp Leu Ser Asp Leu Ile Ser
 515 520 525

Glu Met Glu Met Met Lys Met Ile Gly Lys His Lys Asn Ile Ile Asn
 530 535 540

Leu Leu Gly Ala Cys Thr Gln Asp Gly Pro Leu Tyr Val Ile Val Glu
 545 550 555 560

Tyr Ala Ser Lys Gly Asn Leu Arg Glu Tyr Leu Gln Ala Arg Arg Pro
 565 570 575

Pro Gly Leu Glu Tyr Cys Tyr Asn Pro Ser His Asn Pro Glu Glu Gln
 580 585 590

Leu Ser Ser Lys Asp Leu Val Ser Cys Ala Tyr Gln Val Ala Arg Gly
 595 600 605

Met Glu Tyr Leu Ala Ser Lys Lys Cys Ile His Arg Asp Leu Ala Ala
 610 615 620

Arg Asn Val Leu Val Thr Glu Asp Asn Val Met Lys Ile Ala Asp Phe
 625 630 635 640

Gly Leu Ala Arg Asp Ile His His Ile Asp Tyr Tyr Lys Lys Thr Thr
 645 650 655

Asn Gly Arg Leu Pro Val Lys Trp Met Ala Pro Glu Ala Leu Phe Asp
 660 665 670

Arg Ile Tyr Thr His Gln Ser Asp Val Trp Ser Phe Gly Val Leu Leu
 675 680 685

Trp Glu Ile Phe Thr Leu Gly Gly Ser Pro Tyr Pro Gly Val Pro Val
 690 695 700

Glu Glu Leu Phe Lys Leu Leu Lys Glu Gly His Arg Met Asp Lys Pro
 705 710 715 720

Ser Asn Cys Thr Asn Glu Leu Tyr Met Met Met Arg Asp Cys Trp His
 725 730 735

Ala Val Pro Ser Gln Arg Pro Thr Phe Lys Gln Leu Val Glu Asp Leu
 740 745 750

Asp Arg Ile Val Ala Leu Thr Ser Asn Gln Glu Tyr Leu Asp Leu Ser
 755 760 765

Met Pro Leu Asp Gln Tyr Ser Pro Ser Phe Pro Asp Thr Arg Ser Ser
 770 775 780

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

Glu Glu Pro Cys Leu Pro Arg His Pro Ala Gln Leu Ala Asn Gly Gly
 805 810 815

Leu Lys Arg Arg
 820