SEQUENCE LISTING

<110> IGENICA, INC.

<120> ANTI-CD98 ANTIBODIES AND METHODS OF USE THEREOF

<130> IGN-0001 PCT

<140>
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<150> 61/563,443
<151> 2011-11-23

<160> 124

<170> PatentIn version 3.5

<210> 1
<211> 529
<212> PRT
<213> Homo sapiens

<400> 1
Met Ser Gln Asp Thr Glu Val Asp Met Lys Glu Val Glu Leu Asn Glu
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Leu Glu Pro Glu Lys Gln Pro Met Asn Ala Ala Ser Gly Ala Ala Met
20 25 30

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

Glu Asp Glu Ala Glu Ala Ala Ala Ala Ala Lys Phe Thr Gly Leu Ser
50 55 60

Lys Glu Glu Leu Leu Lys Val Ala Gly Ser Pro Gly Trp Val Arg Thr
65 70 75 80

Arg Trp Ala Leu Leu Leu Leu Phe Trp Leu Gly Trp Leu Gly Met Leu
85 90 95

Ala Gly Ala Val Val Ile Ile Val Arg Ala Pro Arg Cys Arg Glu Leu
100 105 110

Pro Ala Gln Lys Trp Trp His Thr Gly Ala Leu Tyr Arg Ile Gly Asp
115 120 125

Leu Gln Ala Phe Gln Gly His Gly Ala Gly Asn Leu Ala Gly Leu Lys
130 135 140

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Gly Arg Leu Asp Tyr Leu Ser Ser Leu Lys Val Lys Gly Leu Val Leu
145                 150                 155                 160

Gly Pro Ile His Lys Asn Gln Lys Asp Asp Val Ala Gln Thr Asp Leu
                165                 170                 175

Leu Gln Ile Asp Pro Asn Phe Gly Ser Lys Glu Asp Phe Asp Ser Leu
            180                 185                 190

Leu Gln Ser Ala Lys Lys Lys Ser Ile Arg Val Ile Leu Asp Leu Thr
        195                 200                 205

Pro Asn Tyr Arg Gly Glu Asn Ser Trp Phe Ser Thr Gln Val Asp Thr
    210                 215                 220

Val Ala Thr Lys Val Lys Asp Ala Leu Glu Phe Trp Leu Gln Ala Gly
225                 230                 235                 240

Val Asp Gly Phe Gln Val Arg Asp Ile Glu Asn Leu Lys Asp Ala Ser
                245                 250                 255

Ser Phe Leu Ala Glu Trp Gln Asn Ile Thr Lys Gly Phe Ser Glu Asp
            260                 265                 270

Arg Leu Leu Ile Ala Gly Thr Asn Ser Ser Asp Leu Gln Gln Ile Leu
        275                 280                 285

Ser Leu Leu Glu Ser Asn Lys Asp Leu Leu Leu Thr Ser Ser Tyr Leu
    290                 295                 300

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

Tyr Leu Asn Ala Thr Gly Asn Arg Trp Cys Ser Trp Ser Leu Ser Gln
                325                 330                 335

Ala Arg Leu Leu Thr Ser Phe Leu Pro Ala Gln Leu Leu Arg Leu Tyr
            340                 345                 350

Gln Leu Met Leu Phe Thr Leu Pro Gly Thr Pro Val Phe Ser Tyr Gly
        355                 360                 365
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Asp Glu Ile Gly Leu Asp Ala Ala Ala Leu Pro Gly Gln Pro Met Glu
370 375 380

Ala Pro Val Met Leu Trp Asp Glu Ser Ser Phe Pro Asp Ile Pro Gly
385 390 395 400

Ala Val Ser Ala Asn Met Thr Val Lys Gly Gln Ser Glu Asp Pro Gly
405 410 415

Ser Leu Leu Ser Leu Phe Arg Arg Leu Ser Asp Gln Arg Ser Lys Glu
420 425 430

Arg Ser Leu Leu His Gly Asp Phe His Ala Phe Ser Ala Gly Pro Gly
435 440 445

Leu Phe Ser Tyr Ile Arg His Trp Asp Gln Asn Glu Arg Phe Leu Val
450 455 460

Val Leu Asn Phe Gly Asp Val Gly Leu Ser Ala Gly Leu Gln Ala Ser
465 470 475 480

Asp Leu Pro Ala Ser Ala Ser Leu Pro Ala Lys Ala Asp Leu Leu Leu
485 490 495

Ser Thr Gln Pro Gly Arg Glu Glu Gly Ser Pro Leu Glu Leu Glu Arg
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Leu Lys Leu Glu Pro His Glu Gly Leu Leu Leu Arg Phe Pro Tyr Ala
515 520 525

Ala

<210> 2
<211> 1590
<212> DNA
<213> Homo sapiens

<400> 2
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120

ggtctggtga agatcaaggt ggcggaagac gaggcggagg cggcagccgc ggctaagttc
180

acgggcctgt ccaaggagga gctgctgaag gtggcaggca gccccggctg ggtacgcacc
240

cgctgggcac tgctgctgct cttctggctc ggctggctcg gcatgcttgc tggtgccgtg
300

gtcataatcg tgcgagcgcc gcgttgtcgc gagctaccgg cgcagaagtg gtggcacacg
360

ggcgccctct accgcatcgg cgaccttcag gccttccagg gccacggcgc gggcaacctg
420

gcgggtctga aggggcgtct cgattacctg agctctctga aggtgaaggg ccttgtgctg
480

ggtccaattc acaagaacca gaaggatgat gtcgctcaga ctgacttgct gcagatcgac
540

cccaattttg gctccaagga agattttgac agtctcttgc aatcggctaa aaaaaagagc
600

atccgtgtca ttctggacct tactcccaac taccggggtg agaactcgtg gttctccact
660

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720

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tcctccgacc ttcagcagat cctgagccta ctcgaatcca acaaagactt gctgttgact
900

agctcatacc tgtctgattc tggttctact ggggagcata caaaatccct agtcacacag
960

tatttgaatg ccactggcaa tcgctggtgc agctggagtt tgtctcaggc aaggctcctg
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1080

gggacccctg ttttcagcta cggggatgag attggcctgg atgcagctgc ccttcctgga
1140

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1200

gctgtaagtg ccaacatgac tgtgaagggc cagagtgaag accctggctc cctcctttcc
1260

ttgttccggc ggctgagtga ccagcggagt aaggagcgct ccctactgca tggggacttc
1320

cacgcgttct ccgctgggcc tggactcttc tcctatatcc gccactggga ccagaatgag
1380

cgttttctgg tagtgcttaa ctttggggat gtgggcctct cggctggact gcaggcctcc
1440

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1500

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<210> 3
<211> 357
<212> DNA
<213> Artificial Sequence

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

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acctgcaccg tgtccggctt ctccctgacc tcctacggcg tgcactggat ccgccagccc
120

cccggcaagg gcctggagtg gctgggcctg atctgggccg gcggctccat caactacaac
180

tccgccctga tgtcccgcct gtccatctcc aaggacaact ccaagtccca ggtgttcctg
240

aagatgaact ccctggagac cgaggacacc gccatgtact actgcgcccg caagggccac
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atgtactcct acgccatgga ctactggggc cagggcacct ccgtgaccgt gtcctcc
357

<210> 4
<211> 119
<212> PRT
<213> Artificial Sequence

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

<400> 4
Gln Val Gln Leu Lys Glu Ser Gly Pro Gly Leu Val Ala Pro Ser Gln

1 5 10 15

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

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

Gly Leu Ile Trp Ala Gly Gly Ser Ile Asn Tyr Asn Ser Ala Leu Met
50 55 60

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

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

Arg Lys Gly His Met Tyr Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Ser Val Thr Val Ser Ser
115

<210> 5
<211> 342
<212> DNA
<213> Artificial Sequence

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

<400> 5
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tggtaccagc agaagcccgg ccagcccccc aagctgctga tctactgggc ctccacccgc 180

gagtccggcg tgcccgaccg cttcaccggc tccggctccg gcaccgagtt caccctgacc 240

atctcctccg tgcaggccga ggacctggcc gtgtactact gccagaacga ctactcctac 300

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342

<210> 6
<211> 114
<212> PRT
<213> Artificial Sequence

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

<400> 6
Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Thr Val Thr Ala Gly
1 5 10 15

Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Asn Ser
20 25 30

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

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
50 55 60

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

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

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

Ile Lys

<210> 7
<211> 348
<212> DNA
<213> Artificial Sequence

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

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120

cccggccagg gcctggagtg gatcggcgtg atcaaccccg gctccggcat caccaactac
180

aacgagaagt tcaagggcaa ggccaccctg accgccgaca agtcctccaa caccgcctac
240

atgcagctgt cctccctgtc ctccgacgac tccgccgtgt acttctgctc cggctccgcc
300

aactggttcg cctactgggg ccagggcacc ctggtgaccg tgtccgcc
348

<210> 8
<211> 116
<212> PRT
<213> Artificial Sequence

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

<400> 8
Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala
1 5 10 15

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

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

Gly Val Ile Asn Pro Gly Ser Gly Ile Thr Asn Tyr Asn Glu Lys Phe
50 55 60

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

Met Gln Leu Ser Ser Leu Ser Ser Asp Asp Ser Ala Val Tyr Phe Cys
85 90 95

Ser Gly Ser Ala Asn Trp Phe Ala Tyr Trp Gly Gln Gly Thr Leu Val
100 105 110

Thr Val Ser Ala
        115

<210> 9
<211> 339
<212> DNA
<213> Artificial Sequence

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

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atgtcctgca agtcctccca gtccctgctg tactcctcca accagaagaa ctacctggcc
120

tggtaccagc agaagcccgg ccagtccccc aagctgctga tctactgggc ctccacccgc
180

gactccggcg tgcccgaccg cttcaccggc tccggctccg gcaccgactt caccctgacc
240

atctcctccg tgaaggccga ggacctggcc gtgtactact gccagcgcta ctacggctac
300

ccctggacct tcggcggcgg caccaagctg gagatcaag
339

<210> 10
<211> 113
<212> PRT
<213> Artificial Sequence

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

<400> 10
Asp Ile Val Met Ser Gln Ser Pro Ser Ser Leu Ala Val Ser Val Gly
1   5   10   15

Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Tyr Ser
            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 Ile Tyr Trp Ala Ser Thr Arg Asp Ser Gly Val

50 55 60

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

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

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

Lys

<210> 11
<211> 348
<212> DNA
<213> Artificial Sequence

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

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cccggccagg gcctggagtg gatcggcgtg atcaaccccg gctccggcat caccaactac 180

aacgagaagt tcaagggcaa ggccaccctg accgccgaca agtcctccaa caccgcctac 240

atgcagctgt cctccctgtc ctccgacgac tccgccgtgt acttctgctc cggctccgcc 300

aactggttcg cctactgggg ccagggcacc ctggtgaccg tgtccgcc 348

<210> 12
<211> 116
<212> PRT
<213> Artificial Sequence

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

<400> 12
Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly Thr
1 5 10 15

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

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

Gly Val Ile Asn Pro Gly Ser Gly Ile Thr Asn Tyr Asn Glu Lys Phe
50 55 60

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

Met Gln Leu Ser Ser Leu Ser Ser Asp Asp Ser Ala Val Tyr Phe Cys
85 90 95

Ser Gly Ser Ala Asn Trp Phe Ala Tyr Trp Gly Gln Gly Thr Leu Val
100 105 110

Thr Val Ser Ala
115

<210> 13
<211> 339
<212> DNA
<213> Artificial Sequence

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

<400> 13
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tggtaccagc agaagcccgg ccagtccccc aagctgctga tctactgggc ctccacccgc 180

gactccggcg tgcccgaccg cttcaccggc tccggctccg gcaccgactt caccctgacc 240

atctcctccg tgaaggccga ggacctggcc gtgtactact gccagcgcta ctacggctac
300

ccctggacct tcggcggcgg caccaagctg gagatcaag
339

<210> 14
<211> 113
<212> PRT
<213> Artificial Sequence

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

<400> 14
Asp Ile Val Met Ser Gln Ser Pro Ser Ser Leu Ala Val Ser Val Gly
1 5 10 15

Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Tyr Ser
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 Ile Tyr Trp Ala Ser Thr Arg Asp Ser Gly Val
50 55 60

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

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

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

Lys

<210> 15
<211> 114
<212> PRT
<213> Artificial Sequence

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

polypeptide"

<400> 15
Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1 5 10 15

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

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

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
50 55 60

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

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

Asp Tyr Ser Tyr Pro Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu
100 105 110

Ile Lys

<210> 16
<211> 114
<212> PRT
<213> Artificial Sequence

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

<400> 16
Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1 5 10 15

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

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

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Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
    50                  55                  60

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

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

Asp Tyr Ser Tyr Pro Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu
            100                 105                 110

Ile Lys
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<210> 17
<211> 119
<212> PRT
<213> Artificial Sequence

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

<400> 17

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Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
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Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Thr Ser Tyr
            20                  25                  30

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

Gly Leu Ile Trp Ala Gly Gly Ser Ile Asn Tyr Asn Ser Ala Leu Met
    50                  55                  60

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

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

Arg Lys Gly His Met Tyr Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly
            100                 105                 110
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Thr Leu Val Thr Val Ser Ser
        115

<210> 18
<211> 119
<212> PRT
<213> Artificial Sequence

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

<400> 18
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1   5   10   15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Thr Ser Tyr
            20   25   30

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

Gly Leu Ile Trp Ala Gly Gly Ser Ile Asn Tyr Asn Ser Ala Leu Met
    50   55   60

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

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

Arg Lys Gly His Met Tyr Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly
            100   105   110

Thr Leu Val Thr Val Ser Ser
        115

<210> 19
<211> 119
<212> PRT
<213> Artificial Sequence

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

<400> 19
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Thr Ser Tyr
20 25 30

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

Gly Leu Ile Trp Ala Gly Gly Ser Ile Asn Tyr Asn Ser Ala Leu Met
50 55 60

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

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

Arg Lys Gly His Met Tyr Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser
115

<210> 20
<211> 113
<212> PRT
<213> Artificial Sequence

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

<400> 20
Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1 5 10 15

Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Leu Leu Tyr Ser
20 25 30

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

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

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

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

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

Lys

<210> 21
<211> 113
<212> PRT
<213> Artificial Sequence

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

<400> 21
Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1 5 10 15

Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Leu Leu Tyr Ser
20 25 30

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

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

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

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

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

Lys

<210> 22
<211> 116
<212> PRT
<213> Artificial Sequence

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

<400> 22
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1 5 10 15

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

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

Gly Val Ile Asn Pro Gly Ser Gly Ile Thr Asn Tyr Asn Glu Lys Phe
50 55 60

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

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

Ser Gly Ser Ala Asn Trp Phe Ala Tyr Trp Gly Gln Gly Thr Leu Val
100 105 110

Thr Val Ser Ser
115

<210> 23
<211> 116
<212> PRT
<213> Artificial Sequence

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

<400> 23
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser

1 5 10 15

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

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

Gly Val Ile Asn Pro Gly Ser Gly Ile Thr Asn Tyr Asn Glu Lys Phe
50 55 60

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

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

Ser Gly Ser Ala Asn Trp Phe Ala Tyr Trp Gly Gln Gly Thr Leu Val
100 105 110

Thr Val Ser Ser
115

<210> 24
<211> 342
<212> DNA
<213> Artificial Sequence

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

<400> 24
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tggtaccagc agaagcccgg ccagcccccc aagctgctga tctactgggc ctccacccgc 180

gagtccggcg tgcccgaccg cttctccggc tccggctccg gcaccgactt caccctgacc 240

atctcctccc tgcaggccga ggacgtggcc gtgtactact gccagaacga ctactcctac 300

ccccccctgga ccttcggcca gggcaccaag gtggagatca ag
342

<210> 25
<211> 357
<212> DNA
<213> Artificial Sequence

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

<400> 25
caggtgcagc tgcaggagtc cggccccggc ctggtgaagc cctccgagac cctgtccctg
60

acctgcaccg tgtccggctt ctccctgacc tcctacggcg tgcactggat ccgccagccc
120

cccggcaagg gcctggagtg gctgggcctg atctgggccg gcggctccat caactacaac
180

tccgccctga tgtcccgcgt gaccatctcc aaggacacct ccaagaacca ggtgtccctg
240

aagctgtcct ccgtgaccgc cgccgacacc gccgtgtact actgcgcccg caagggccac
300

atgtactcct acgccatgga ctactggggc cagggcaccc tggtgaccgt gtcctcc
357

<210> 26
<211> 348
<212> DNA
<213> Artificial Sequence

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

<400> 26
caggtgcagc tggtgcagtc cggcgccgag gtgaagaagc ccggctcctc cgtgaaggtg
60

tcctgcaagg cctccggcaa cgccttcacc aactacctga tcgagtgggt gcgccaggcc
120

cccggccagg gcctggagtg gatgggcgtg atcaaccccg gctccggcat caccaactac
180

aacgagaagt tcaagggcaa ggccaccatc accgccgaca agtccacctc caccgcctac
240

atggagctgt cctccctgcg ctccgaggac accgccgtgt actactgctc cggctccgcc
300

aactggttcg cctactgggg ccagggcacc ctggtgaccg tgtcctcc
348

<210> 27
<211> 339
<212> DNA
<213> Artificial Sequence

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

<400> 27
gacatcgtga tgacccagtc ccccgactcc ctggccgtgt ccctgggcga gcgcgccacc
60

atcaactgca agtcctccca gtccctgctg tactcctcca accagaagaa ctacctggcc
120

tggtaccagc agaagcccgg ccagcccccc aagctgctga tctactgggc ctccacccgc
180

gactccggcg tgcccgaccg cttctccggc tccggctccg gcaccgactt caccctgacc
240

atctcctccc tgcaggccga ggacgtggcc gtgtactact gccagcgcta ctacggctac
300

ccctggacct tcggcggcgg caccaaggtg gagatcaag
339

<210> 28
<211> 348
<212> DNA
<213> Artificial Sequence

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

<400> 28
caggtgcagc tggtgcagtc cggcgccgag gtgaagaagc ccggctcctc cgtgaaggtg
60

tcctgcaagg cctccggcaa cgccttcacc aactacctga tcgagtggat ccgccaggcc
120

cccggccagg gcctggagtg gatcggcgtg atcaaccccg gctccggcat caccaactac
180

aacgagaagt tcaagggcaa ggccaccctg accgccgaca agtccacctc caccgcctac
240

atggagctgt cctccctgcg ctccgaggac accgccgtgt actactgctc cggctccgcc
300

aactggttcg cctactgggg ccagggcacc ctggtgaccg tgtcctcc
348

<210> 29
<211> 339
<212> DNA
<213> Artificial Sequence

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

<400> 29
gacatcgtga tgacccagtc ccccgactcc ctggccgtgt ccctgggcga gcgcgccacc
60

atcaactgca agtcctccca gtccctgctg tactcctcca accagaagaa ctacctggcc
120

tggtaccagc agaagcccgg ccagcccccc aagctgctga tctactgggc ctccacccgc
180

gactccggcg tgcccgaccg cttcaccggc tccggctccg gcaccgactt caccctgacc
240

atctcctccc tgcaggccga ggacgtggcc gtgtactact gccagcgcta ctacggctac
300

ccctggacct tcggcggcgg caccaaggtg gagatcaag
339

<210> 30
<211> 342
<212> DNA
<213> Artificial Sequence

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

<400> 30
caggtgcagt tgaaggagtc aggacctggc ctggtggcgc cctcacagag cctgtccatc
60

acttgcactg tctctgggtt ttcattaacc acctatggtg tacactgggt tcgccagcct
120

ccaggaaagg gtctggagtg gctgggagtg atgtggacta atggaatcac aaattataat
180

tcggctctca tgtccagact gagcatcagc aaagacaact ccaagagcca agttttctta
240

aaaatgaaca gtctgcaaac tgatgacaca gccatgtact actgtgccag aggaggacac
300

tacggtagta cctcctatgc tatggacttc tggagtcaag ga
342

<210> 31
<211> 114
<212> PRT
<213> Artificial Sequence

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

<400> 31
Gln Val Gln Leu Lys Glu Ser Gly Pro Gly Leu Val Ala Pro Ser Gln
1 5 10 15

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

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

Gly Val Met Trp Thr Asn Gly Ile Thr Asn Tyr Asn Ser Ala Leu Met
50 55 60

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

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

Arg Gly Gly His Tyr Gly Ser Thr Ser Tyr Ala Met Asp Phe Trp Ser
100 105 110

Gln Gly

<210> 32
<211> 351

<212> DNA
<213> Artificial Sequence

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

<400> 32
gacatccaga tgactcagtc tccagcctcc ctatctgcat ctgtgggaga aactgtcacc
60

atcacatgtc gagcaagtgg gaatattcac aattatttaa catggtatca gcagaaacag
120

ggaaaatctc ctcagctcct ggtctatact gcaaaaacct tagcagatgg tgtgccatca
180

aggttcagtg gcagtggatc aggaacacaa tattctctca agatcaacag cctgcagcct
240

gaagattttg ggagttatta ctgtcaacat ttttggaata ctccttacac gttcggaggg
300

gggaccaagc tggaaataaa acgggctgat gctgcaccaa ctgtatccat c
351

<210> 33
<211> 107
<212> PRT
<213> Artificial Sequence

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

<400> 33
Asp Ile Gln Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser Val Gly
1 5 10 15

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

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

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

Ser Gly Ser Gly Thr Gln Tyr Ser Leu Lys Ile Asn Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Gly Ser Tyr Tyr Cys Gln His Phe Trp Asn Thr Pro Tyr
85 90 95

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

<210> 34
<211> 342
<212> DNA
<213> Artificial Sequence

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

<400> 34
caggtgcagc tggaggagtc aggacctggc ctggtggcga cctcacagag cctgtccatc 60

acttgcactg tctctgggtt ttcattaacc aactgtggtg tacactgggt tcgccagcct 120

caaggaaagg gtctagagtg gctgggagtg atatggccta atggaatcac aatttataat 180

tcgggtctca tgtccagact gagtatcagc aaagacaact ccaagagcca agttttctta 240

aaaaagaaca gtctgcaaac tgatgacaca gccatgtact actgtgccag aggaggacat 300

tacggtagta gctcctatgc tatggactac tggagtcaag ga 342

<210> 35
<211> 114
<212> PRT
<213> Artificial Sequence

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

<400> 35
Gln Val Gln Leu Glu Glu Ser Gly Pro Gly Leu Val Ala Thr Ser Gln
1 5 10 15

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

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

Gly Val Ile Trp Pro Asn Gly Ile Thr Ile Tyr Asn Ser Gly Leu Met
50 55 60

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

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

Arg Gly Gly His Tyr Gly Ser Ser Ser Tyr Ala Met Asp Tyr Trp Ser
100 105 110

Gln Gly

<210> 36
<211> 370
<212> DNA
<213> Artificial Sequence

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

<400> 36
gacatccaga tgactcagtc tccagcctcc ctatctgcat ctgtgggaga aactgtcacc
60

atcacatgtc gagcaagtgg gaatattcac aattatttaa catggtatca gcagaaaccg
120

ggaaaatctc ctcaactcct ggtctatact gcaaaaacct tagcagatgg tgtgccatca
180

aggttcagtg gcagtggatc aggaacacaa tattctctca agatcaacag cctgcagcct
240

gaagattttg ggagttatta ctgtcaacat ttttggaata ctccttacac attcggaggg
300

gggaccaagc tggaaataaa acgggctgat gctgcaccaa ctgtatccat cttcccacca
360

tccagtaagc
370

<210> 37

<211> 107
<212> PRT
<213> Artificial Sequence

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

<400> 37
Asp Ile Gln Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser Val Gly
1 5 10 15

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

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

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

Ser Gly Ser Gly Thr Gln Tyr Ser Leu Lys Ile Asn Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Gly Ser Tyr Tyr Cys Gln His Phe Trp Asn Thr Pro Tyr
85 90 95

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

<210> 38
<211> 113
<212> PRT
<213> Homo sapiens

<400> 38
Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1 5 10 15

Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser
20 25 30

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

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
50 55 60

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

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

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

Lys

<210> 39
<211> 122
<212> PRT
<213> Homo sapiens

<400> 39
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Tyr
20 25 30

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

Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys
50 55 60

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

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

Arg Arg His Asn Ser Ser Ser Trp Tyr Gly Arg Tyr Phe Asp Tyr Trp
100 105 110

Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 40
<211> 121

<212> PRT
<213> Homo sapiens

<400> 40
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1   5   10   15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Tyr
            20   25   30

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

Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys
    50   55   60

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

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

Arg His Asn Ser Ser Ser Trp Tyr Gly Arg Tyr Phe Asp Tyr Trp Gly
            100   105   110

Gln Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 41
<211> 43
<212> PRT
<213> Homo sapiens

<400> 41
Tyr Gly Asp Glu Ile Gly Leu Asp Ala Ala Ala Leu Pro Gly Gln Pro
1   5   10   15

Met Glu Ala Pro Val Met Leu Trp Asp Glu Ser Ser Phe Pro Asp Ile
            20   25   30

Pro Gly Ala Val Ser Ala Asn Met Thr Val Lys
        35   40

<210> 42
<211> 7
<212> PRT
<213> Homo sapiens

<400> 42
Phe Pro Asp Ile Pro Gly Ala
1 5

<210> 43
<211> 4
<212> PRT
<213> Homo sapiens

<400> 43
Pro Gly Gln Pro
1

<210> 44
<211> 15
<212> PRT
<213> Artificial Sequence

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

<400> 44
Ser Phe Pro Asp Ile Pro Gly Ala Val Ser Ala Asn Met Thr Val
1 5 10 15

5 10 15

<210> 45
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 45
Tyr Gly Asp Glu Ile Gly Leu Asp Ala Ala Ala
1 5 10

<210> 46
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 46
Gly Asp Glu Ile Gly Leu Asp Ala Ala Ala Leu
1   5   10

<210> 47
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 47
Asp Glu Ile Gly Leu Asp Ala Ala Ala Leu Pro
1   5   10

<210> 48
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 48
Glu Ile Gly Leu Asp Ala Ala Ala Leu Pro Gly
1   5   10

<210> 49
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 49
Ile Gly Leu Asp Ala Ala Ala Leu Pro Gly Gln
1   5   10

<210> 50
<211> 11
<212> PRT
<213> Artificial Sequence

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

peptide"

<400> 50
Gly Leu Asp Ala Ala Ala Leu Pro Gly Gln Pro
1 5 10

<210> 51
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 51
Leu Asp Ala Ala Ala Leu Pro Gly Gln Pro Met
1 5 10

<210> 52
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 52
Asp Ala Ala Ala Leu Pro Gly Gln Pro Met Glu
1 5 10

<210> 53
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 53
Ala Ala Ala Leu Pro Gly Gln Pro Met Glu Ala
1 5 10

<210> 54
<211> 11
<212> PRT
<213> Artificial Sequence

<220>

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

<400> 54
Ala Ala Leu Pro Gly Gln Pro Met Glu Ala Pro
1 5 10

<210> 55
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 55
Ala Leu Pro Gly Gln Pro Met Glu Ala Pro Val
1 5 10

<210> 56
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 56
Leu Pro Gly Gln Pro Met Glu Ala Pro Val Met
1 5 10

<210> 57
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 57
Pro Gly Gln Pro Met Glu Ala Pro Val Met Leu
1 5 10

<210> 58
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 58
Gly Gln Pro Met Glu Ala Pro Val Met Leu Trp
1 5 10

<210> 59
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 59
Gln Pro Met Glu Ala Pro Val Met Leu Trp Asp
1 5 10

<210> 60
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 60
Ala Pro Val Met Leu Trp Asp Glu Ser Ser Phe
1 5 10

<210> 61
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 61
Pro Val Met Leu Trp Asp Glu Ser Ser Phe Pro
1 5 10

<210> 62
<211> 11

<212> PRT
<213> Artificial Sequence

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

<400> 62
Val Met Leu Trp Asp Glu Ser Ser Phe Pro Asp
1 5 10

<210> 63
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 63
Met Leu Trp Asp Glu Ser Ser Phe Pro Asp Ile
1 5 10

<210> 64
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 64
Leu Trp Asp Glu Ser Ser Phe Pro Asp Ile Pro
1 5 10

<210> 65
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 65
Trp Asp Glu Ser Ser Phe Pro Asp Ile Pro Gly
1 5 10

<210> 66
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 66
Asp Glu Ser Ser Phe Pro Asp Ile Pro Gly Ala
1 5 10

<210> 67
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 67
Glu Ser Ser Phe Pro Asp Ile Pro Gly Ala Val
1 5 10

<210> 68
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 68
Ser Ser Phe Pro Asp Ile Pro Gly Ala Val Ser
1 5 10

<210> 69
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 69
Ser Phe Pro Asp Ile Pro Gly Ala Val Ser Ala
1 5 10

<210> 70
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 70
Phe Pro Asp Ile Pro Gly Ala Val Ser Ala Asn
1 5 10

<210> 71
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 71
Pro Asp Ile Pro Gly Ala Val Ser Ala Asn Met
1 5 10

<210> 72
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 72
Asp Ile Pro Gly Ala Val Ser Ala Asn Met Thr
1 5 10

<210> 73
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 73

Ile Pro Gly Ala Val Ser Ala Asn Met Thr Val
1 5 10

<210> 74
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 74
Pro Gly Ala Val Ser Ala Asn Met Thr Val Lys
1 5 10

<210> 75
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 75
Gly Leu Asp Ala Ala Ala Leu Pro Ala Gln Pro
1 5 10

<210> 76
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 76
Gly Leu Asp Ala Ala Ala Leu Ala Gly Gln Pro
1 5 10

<210> 77
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 77
Gly Leu Asp Ala Ala Ala Leu Pro Gly Gln Pro
1 5 10

<210> 78
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 78
Gly Leu Asp Ala Ala Gly Leu Pro Gly Gln Pro
1 5 10

<210> 79
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 79
Trp Asp Glu Ser Ser Phe Pro Ala Ile Pro Gly
1 5 10

<210> 80
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 80
Glu Ser Ser Phe Pro Asp Ala Pro Gly Ala Val
1 5 10

<210> 81
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source

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

<400> 81
Trp Asp Glu Ser Ser Phe Pro Asp Ala Pro Gly
1 5 10

<210> 82
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 82
Pro Ala Ile Pro Gly Ala Val Ser Ala Asn Met
1 5 10

<210> 83
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 83
Glu Ser Ser Phe Pro Ala Ile Pro Gly Ala Val
1 5 10

<210> 84
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 84
Glu Ser Ser Phe Pro Asp Ile Pro Gly Gly Val
1 5 10

<210> 85
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 85
Ser Phe Pro Asp Ala Pro Gly Ala Val Ser Ala
1 5 10

<210> 86
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 86
Glu Ile Gly Leu Asp Ala Ala Ala Leu Ala Gly
1 5 10

<210> 87
<211> 11
<212> PRT
<213> Artificial Sequence

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

<400> 87
Leu Pro Ala Gln Pro Met Glu Ala Pro Val Met
1 5 10

<210> 88
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
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peptide"

<400> 88
Leu Ala Gly Gln Pro Met Glu Ala Pro Val Met
1 5 10

<210> 89
<211> 11
<212> PRT

<213> Artificial Sequence

<220>
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peptide"

<400> 89
Glu Ile Gly Leu Asp Ala Ala Gly Leu Pro Gly
1 5 10

<210> 90
<211> 11
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<400> 90
Ala Ala Leu Pro Ala Gln Pro Met Glu Ala Pro
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<210> 91
<211> 11
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<400> 91
Asp Ala Ala Ala Leu Pro Ala Gln Pro Met Glu
1 5 10

<210> 92
<211> 11
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<220>
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<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 92
Glu Ile Gly Leu Asp Ala Ala Ala Leu Pro Ala
1 5 10

<210> 93

<211> 11
<212> PRT
<213> Artificial Sequence

<220>
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peptide"

<400> 93
Glu Ile Gly Leu Asp Ala Ala Ala Leu Pro Gly
1 5 10

<210> 94
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
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peptide"

<400> 94
Ser Phe Pro Ala Ile Pro Gly Ala Val Ser Ala
1 5 10

<210> 95
<211> 11
<212> PRT
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<220>
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peptide"

<400> 95
Pro Asp Ala Pro Gly Ala Val Ser Ala Asn Met
1 5 10

<210> 96
<211> 526
<212> PRT
<213> Mus musculus

<400> 96
Met Ser Gln Asp Thr Glu Val Asp Met Lys Asp Val Glu Leu Asn Glu
1 5 10 15

Leu Glu Pro Glu Lys Gln Pro Met Asn Ala Ala Asp Gly Ala Ala Ala
20 25 30

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Gly Glu Lys Asn Gly Leu Val Lys Ile Lys Val Ala Glu Asp Glu Thr
        35                  40                  45

Glu Ala Gly Val Lys Phe Thr Gly Leu Ser Lys Glu Glu Leu Leu Lys
    50                  55                  60

Val Ala Gly Ser Pro Gly Trp Val Arg Thr Arg Trp Ala Leu Leu Leu
65                  70                  75                  80

Leu Phe Trp Leu Gly Trp Leu Gly Met Leu Ala Gly Ala Val Val Ile
                85                  90                  95

Ile Val Arg Ala Pro Arg Cys Arg Glu Leu Pro Val Gln Arg Trp Trp
            100                 105                 110

His Lys Gly Ala Leu Tyr Arg Ile Gly Asp Leu Gln Ala Phe Val Gly
        115                 120                 125

Arg Asp Ala Gly Gly Ile Ala Gly Leu Lys Ser His Leu Glu Tyr Leu
    130                 135                 140

Ser Thr Leu Lys Val Lys Gly Leu Val Leu Gly Pro Ile His Lys Asn
145                 150                 155                 160

Gln Lys Asp Glu Ile Asn Glu Thr Asp Leu Lys Gln Ile Asn Pro Thr
                165                 170                 175

Leu Gly Ser Gln Glu Asp Phe Lys Asp Leu Leu Gln Ser Ala Lys Lys
            180                 185                 190

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

Asn Ala Trp Phe Leu Pro Ala Gln Ala Asp Ile Val Ala Thr Lys Met
    210                 215                 220

Lys Glu Ala Leu Ser Ser Trp Leu Gln Asp Gly Val Asp Gly Phe Gln
225                 230                 235                 240

Phe Arg Asp Val Gly Lys Leu Met Asn Ala Pro Leu Tyr Leu Ala Glu
                245                 250                 255

Trp Gln Asn Ile Thr Lys Asn Leu Ser Glu Asp Arg Leu Leu Ile Ala
            260                 265                 270
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Gly Thr Glu Ser Ser Asp Leu Gln Gln Ile Val Asn Ile Leu Glu Ser
        275                 280                 285

Thr Ser Asp Leu Leu Leu Thr Ser Ser Tyr Leu Ser Asn Ser Thr Phe
    290                 295                 300

Thr Gly Glu Arg Thr Glu Ser Leu Val Thr Arg Phe Leu Asn Ala Thr
305                 310                 315                 320

Gly Ser Gln Trp Cys Ser Trp Ser Val Ser Gln Ala Gly Leu Leu Ala
                325                 330                 335

Asp Phe Ile Pro Asp His Leu Leu Arg Leu Tyr Gln Leu Leu Leu Phe
            340                 345                 350

Thr Leu Pro Gly Thr Pro Val Phe Ser Tyr Gly Asp Glu Leu Gly Leu
        355                 360                 365

Gln Gly Ala Leu Pro Gly Gln Pro Ala Lys Ala Pro Leu Met Pro Trp
    370                 375                 380

Asn Glu Ser Ser Ile Phe His Ile Pro Arg Pro Val Ser Leu Asn Met
385                 390                 395                 400

Thr Val Lys Gly Gln Asn Glu Asp Pro Gly Ser Leu Leu Thr Gln Phe
                405                 410                 415

Arg Arg Leu Ser Asp Leu Arg Gly Lys Glu Arg Ser Leu Leu His Gly
            420                 425                 430

Asp Phe His Ala Leu Ser Ser Ser Pro Asp Leu Phe Ser Tyr Ile Arg
        435                 440                 445

His Trp Asp Gln Asn Glu Arg Tyr Leu Val Val Leu Asn Phe Arg Asp
    450                 455                 460

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

Ser Leu Pro Ala Ser Ala Lys Leu Leu Leu Ser Thr Asp Ser Ala Arg
                485                 490                 495
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Gln Ser Arg Glu Glu Asp Thr Ser Leu Lys Leu Glu Asn Leu Ser Leu
500 505 510

Asn Pro Tyr Glu Gly Leu Leu Leu Gln Phe Pro Phe Val Ala
515 520 525

<210> 97
<211> 48
<212> PRT
<213> Homo Sapiens

<400> 97
Thr Leu Pro Gly Thr Pro Val Phe Ser Tyr Gly Asp Glu Ile Gly Leu
1 5 10 15

Asp Ala Ala Ala Leu Pro Gly Gln Pro Met Glu Ala Pro Val Met Leu
20 25 30

Trp Asp Glu Ser Ser Phe Pro Asp Ile Pro Gly Ala Val Ser Ala Asn
35 40 45

<210> 98
<211> 48
<212> PRT
<213> Mus Musculus

<400> 98
Thr Leu Pro Gly Thr Pro Val Phe Ser Tyr Gly Asp Glu Leu Gly Leu
1 5 10 15

Gln Gly Ala Leu Pro Gly Gln Pro Ala Lys Ala Pro Leu Met Pro Trp
20 25 30

Asn Glu Ser Ser Ile Phe His Ile Pro Arg Pro Val Ser Leu Asn
35 40 45