SEQUENCE LISTING

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<120> TDP-43 SPECIFIC BINDING MOLECULES

<130> 2159.362PC01

<140> To be assigned
<141> Herewith

<150> 60/553,113
<151> 2011-10-28

<160> 328

<170> PatentIn version 3.5

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20 25 30

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

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

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

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

Ala Lys Asn Tyr Tyr Ser Ser Phe Gly Tyr Asn Trp Ala Ala Phe His
100 105 110

Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Gln
20 25 30

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

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

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

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

Ala Lys Asn Tyr Tyr Ser Ser Phe Gly Tyr Asn Trp Ala Ala Phe His
100 105 110

Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
115 120

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Ser Gln Ala Met Ser
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Ala Leu Ser Arg Thr Gly Asp Tyr Thr Trp Tyr Ala Asp Ser Val Arg
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Gly

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Asn Tyr Tyr Ser Ser Phe Gly Tyr Asn Trp Ala Ala Phe His Ile

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

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
35 40 45

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

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

Pro Glu Asp Phe Ala Met Tyr Phe Cys Gln Gln Tyr Gly Gly Ser Pro
85 90 95

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

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Arg Ala Ser Gln Asp Val Asn Asn Asn Tyr Leu Ala
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Gly Ala Ser Arg Arg Ala Thr
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Gln Gln Tyr Gly Gly Ser Pro Pro Tyr Thr
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Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Ile Ser Cys Thr Thr Ser Gly Phe Ile Phe Ser Asp Tyr
20 25 30

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

Ser Arg Ile Asn Leu Asp Gly Ser Asp Thr Ile Tyr Ala Asp Ser Val
50 55 60

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

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

Ala Arg Ser Arg Lys Ser Val Trp Gly Gln Gly Thr Met Val Thr Val
100 105 110

Ser Ser

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Asp Tyr Trp Met His
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Arg Ile Asn Leu Asp Gly Ser Asp Thr Ile Tyr Ala Asp Ser Val Lys
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Gly

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

Ser Ile Thr Ile Ser Cys Thr Gly Ser Asn Thr Asp Val Gly Ala Tyr
20 25 30

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

Val Ile Phe Asp Val Asp Val Arg Pro Ser Gly Ile Ser Asp Arg Phe
50 55 60

Ser Gly Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu
65 70 75 80

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

Gly Thr Leu Val Phe Gly Gly Gly Thr Lys Val Thr Val Val
100 105 110

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

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

Gly Trp Ile Asn Ala Ala Phe Ile Asn Thr Lys Tyr Ser Gln Lys Phe
50 55 60

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

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

Ala Arg Arg Ala Ser Gly Ser Asn Gly Leu Asp Val Trp Gly Gln Gly
100 105 110

Thr Thr Val Thr Val Ser Ser
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<400> 19

Ser Tyr Thr Leu His
1 5

<210> 20
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<400> 20

Trp Ile Asn Ala Ala Phe Ile Asn Thr Lys Tyr Ser Gln Lys Phe Gln
1 5 10 15

Gly

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Arg Ala Ser Gly Ser Asn Gly Leu Asp Val
1 5 10

<210> 22
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<400> 22

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

Asp Arg Ile Thr Ile Thr Cys Gln Ala Ser Arg Asp Ile Thr Asn Tyr
20 25 30

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

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

Ser Gly Ser Gly Thr His Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

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

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

<210> 23
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<400> 23

Gln Ala Ser Arg Asp Ile Thr Asn Tyr Leu Asn
1 5 10

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Asp Ala Ser Tyr Leu Glu Thr

1 5

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<400> 25

Gln Gln Tyr Asp Ser Val Pro Leu Thr
1 5

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Arg Asp His
20 25 30

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

Ala Val Ile Trp Leu Asp Gly Ser Ser Arg Phe Tyr Ala Asp Ser Val
50 55 60

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

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

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

Gln Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 27
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<212> PRT
<213> Homo sapiens

<400> 27

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Arg Asp His
20 25 30

Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val

```
        35                  40                  45

Ala Val Ile Trp Leu Asp Gly Ser Ser Arg Phe Tyr Ala Asp Ser Val
    50                  55                  60

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

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

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

Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120


<210>  28
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<213>  Homo sapiens

<400>  28

Asp His Gly Met His
1               5


<210>  29
<211>  17
<212>  PRT
<213>  Homo sapiens

<400>  29

Val Ile Trp Leu Asp Gly Ser Ser Arg Phe Tyr Ala Asp Ser Val Glu
1               5                   10                  15

Gly



<210>  30
<211>  12
<212>  PRT
<213>  Homo sapiens

<400>  30

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


<210>  31
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Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1               5                   10                  15
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```
Glu Arg Ala Thr Leu Ser Cys Trp Ala Ser Gln Asn Val Asn His Tyr
            20                  25                  30

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

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

Ser Gly Ser Gly Thr His Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
65                  70                  75                  80

Glu Asp Ser Ala Val Tyr Tyr Cys Gln His Arg Ser Asp Trp Thr Phe
                85                  90                  95

Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105


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<400>  32

Trp Ala Ser Gln Asn Val Asn His Tyr Leu Val
1               5                   10


<210>  33
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<400>  33

Asp Thr Ser Val Arg Ala Ala
1               5


<210>  34
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<400>  34

Gln His Arg Ser Asp Trp Thr
1               5


<210>  35
<211>  119
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<213>  Homo sapiens

<400>  35

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

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

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

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

Lys Gly Arg Ile Thr Met Ser Ala Asp Thr Pro Ala Arg Ser Val Ser
65                  70                  75                  80

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

Ala Arg Leu Pro Val Asn Ile Glu Val Leu Asp Leu Trp Gly Gln Gly
            100                 105                 110

Thr Leu Val Thr Val Ser Ser
        115
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<210> 36
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<400> 36

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

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

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

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

Lys Gly Arg Ile Thr Met Ser Ala Asp Thr Pro Ala Arg Ser Val Ser
65                  70                  75                  80

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

Ala Arg Leu Pro Val Asn Ile Glu Val Leu Asp Leu Trp Gly Gln Gly
            100                 105                 110

Thr Leu Val Thr Val Ser Ser
        115
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<213> Homo sapiens

<400> 37

Gly Tyr Tyr Met His
1 5

<210> 38
<211> 17
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<213> Homo sapiens

<400> 38

Val Ile Asn Pro Asn Gly Gly Ser Thr Asn Tyr Ala Gln Lys Phe Lys
1 5 10 15

Gly

<210> 39
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Leu Pro Val Asn Ile Glu Val Leu Asp Leu
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<210> 40
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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 Arg Ser Ser Gln Thr Val Leu Phe Ser
20 25 30

Ser Asn Asp 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 Val Arg Ala Ser Gly Val
50 55 60

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

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

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

Lys

<210> 41
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<213> Homo sapiens

<400> 41

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

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

Ser Asn Asp 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 Val Arg Ala Ser Gly Val
50 55 60

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

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

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

Lys

<210> 42
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<400> 42

Arg Ser Ser Gln Thr Val Leu Phe Ser Ser Asn Asp Lys Asn Tyr Leu
1 5 10 15

Ala

<210> 43
<211> 7
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<213> Homo sapiens

<400> 43

Trp Ala Ser Val Arg Ala Ser
1 5

<210> 44
<211> 9
<212> PRT
<213> Homo sapiens

<400> 44

Gln Gln Ser Ser Thr Ala Pro Leu Thr
1 5

<210> 45
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<213> Homo sapiens

<400> 45

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 Thr Phe Thr Asn Tyr
20 25 30

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

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

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

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

Ala Arg Gln Arg Pro Ser Gly Tyr Ser Gly Tyr Gly Pro Ser Glu Ser
100 105 110

Tyr Gly Asn Pro Thr Asp Asp Ala Phe Asp Val Trp Gly Gln Gly Thr
115 120 125

Thr Val Thr Val Ser Ser
130

<210> 46
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<400> 46

Asn Tyr Tyr Met His
1 5

<210> 47
<211> 17

<212> PRT
<213> Homo sapiens

<400> 47

Ile Ile Asn Pro Ser Gly Gly Arg Thr Ser Tyr Ala Gln Lys Phe Gln
1 5 10 15

Gly

<210> 48
<211> 25
<212> PRT
<213> Homo sapiens

<400> 48

Gln Arg Pro Ser Gly Tyr Ser Gly Tyr Gly Pro Ser Glu Ser Tyr Gly
1 5 10 15

Asn Pro Thr Asp Asp Ala Phe Asp Val
20 25

<210> 49
<211> 109
<212> PRT
<213> Homo sapiens

<400> 49

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

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

His Trp Tyr Gln Gln Arg Pro Gly Gln Ala Pro Val Leu Val Val Tyr
35 40 45

Asp Asp Ser Asp Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
50 55 60

Asn Ser Gly Asp Thr Ala Thr Leu Thr Ile Ser Arg Val Glu Val Gly
65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Val Trp Asp Asn Ser Ser Asp His
85 90 95

Leu Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105

<210> 50
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<400> 50

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Gly Gly Asn Asn Ile Gly Ser Arg Gly Val His
1               5                   10


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<400>  51

Asp Asp Ser Asp Arg Pro Ser
1               5


<210>  52
<211>  12
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<213>  Homo sapiens

<400>  52

Gln Val Trp Asp Asn Ser Ser Asp His Leu Val Val
1               5                   10


<210>  53
<211>  130
<212>  PRT
<213>  Homo sapiens

<400>  53

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1               5                   10                  15


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


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


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


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


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


Ala Arg Asp Thr Tyr Gln Tyr Asp Ser Ser Thr Tyr Tyr Pro Tyr Phe
            100                 105                 110


Tyr Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val
        115                 120                 125


Ser Ser
    130
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<210> 54
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<400> 54

Asn Tyr Val Met Tyr
1 5

<210> 55
<211> 17
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<213> Homo sapiens

<400> 55

Phe Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Pro Asp Ser Val Lys
1 5 10 15

Gly

<210> 56
<211> 21
<212> PRT
<213> Homo sapiens

<400> 56

Asp Thr Tyr Gln Tyr Asp Ser Ser Thr Tyr Tyr Pro Tyr Phe Tyr Tyr
1 5 10 15

Tyr Gly Met Asp Val
20

<210> 57
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<213> Homo sapiens

<400> 57

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

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

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

Met Ile Tyr Glu Val Ser Asn Arg Pro Ser Gly Val Ser Ser Arg Phe
50 55 60

Ser Gly Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu
65 70 75 80

```
Gln Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ser Ser Phe Ala Ser Ser
                85                  90                  95


Ser Thr Ser Val Thr Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
            100                 105                 110


<210>  58
<211>  14
<212>  PRT
<213>  Homo sapiens

<400>  58

Ile Gly Thr Ser Ser Asp Val Gly Gly Tyr Asn Tyr Val Ser
1               5                   10


<210>  59
<211>  7
<212>  PRT
<213>  Homo sapiens

<400>  59

Glu Val Ser Asn Arg Pro Ser
1               5


<210>  60
<211>  11
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<213>  Homo sapiens

<400>  60

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


<210>  61
<211>  129
<212>  PRT
<213>  Homo sapiens

<400>  61

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


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


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


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


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


Leu Gln Ile Asn Ser Leu Arg Val Glu Asp Thr Ala Val Tyr Tyr Cys
```

85 90 95

Ala Gln Gly Gly Gly Gly Glu Met Thr Ala Val Thr Met Asp Gly Thr
100 105 110

Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser
115 120 125

Ser

<210> 62
<211> 5
<212> PRT
<213> Homo sapiens

<400> 62

Ser Tyr Ala Met Ser
1 5

<210> 63
<211> 17
<212> PRT
<213> Homo sapiens

<400> 63

Ala Ile Ser Gly Gly Gly Asp Arg Thr Tyr Ser Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 64
<211> 20
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<213> Homo sapiens

<400> 64

Gly Gly Gly Gly Glu Met Thr Ala Val Thr Met Asp Gly Thr Tyr Tyr
1 5 10 15

Gly Met Asp Val
20

<210> 65
<211> 110
<212> PRT
<213> Homo sapiens

<400> 65

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

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

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

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

Ser Gly Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu
65                  70                  75                  80

Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Cys Ser Tyr Ala Gly Ser
                85                  90                  95

Tyr Thr Tyr Val Phe Gly Ser Gly Thr Lys Val Thr Val Leu
            100                 105                 110
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<210> 66
<211> 14
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<213> Homo sapiens

<400> 66

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Thr Gly Thr Ser Ser Asn Val Gly Thr Tyr Lys Phe Val Ser
1               5                   10
```

<210> 67
<211> 7
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<213> Homo sapiens

<400> 67

```
Asp Val Thr Lys Arg Pro Ser
1               5
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<210> 68
<211> 10
<212> PRT
<213> Homo sapiens

<400> 68

```
Cys Ser Tyr Ala Gly Ser Tyr Thr Tyr Val
1               5                   10
```

<210> 69
<211> 119
<212> PRT
<213> Homo sapiens

<400> 69

```
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Met
1               5                   10                  15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Phe Ser Ser His
            20                  25                  30
```

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

Ala Val Ile Ser Tyr Asp Ala Ser Asn Lys Ser Tyr Ala Asp Ser Val
    50                  55                  60

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

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

Ala Asn Ala Phe Ser Ser Ser Ala Ser Gly Gly Tyr Trp Gly Gln Gly
            100                 105                 110

Thr Leu Val Thr Val Ser Ser
        115
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<210> 70
<211> 5
<212> PRT
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<400> 70

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Ser His Gly Met His
1               5
```

<210> 71
<211> 17
<212> PRT
<213> Homo sapiens

<400> 71

```
Val Ile Ser Tyr Asp Ala Ser Asn Lys Ser Tyr Ala Asp Ser Val Lys
1               5                   10                  15

Gly
```

<210> 72
<211> 10
<212> PRT
<213> Homo sapiens

<400> 72

```
Ala Phe Ser Ser Ser Ala Ser Gly Gly Tyr
1               5                   10
```

<210> 73
<211> 113
<212> PRT
<213> Homo sapiens

<400> 73

```
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 Arg Ser Ser Gln Ser Leu Val His Ser
            20                  25                  30


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


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


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


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


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


Lys
```

<210> 74
<211> 16
<212> PRT
<213> Homo sapiens

<400> 74

```
Arg Ser Ser Gln Ser Leu Val His Ser Asp Gly Val Thr Tyr Leu Asn
1               5                   10                  15
```

<210> 75
<211> 7
<212> PRT
<213> Homo sapiens

<400> 75

```
Lys Val Ser Asn Arg Asp Ser
1               5
```

<210> 76
<211> 10
<212> PRT
<213> Homo sapiens

<400> 76

```
Met Gln Gly Thr His Trp Pro Pro Trp Thr
1               5                   10
```

<210> 77
<211> 126
<212> PRT
<213> Homo sapiens

<400> 77

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1 5 10 15

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

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

Ala Ile Ile Tyr Tyr Asp Ser Ser Gln Arg Tyr Tyr Ala Asp Ser Val
50 55 60

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

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

Ala Arg Asp Leu Pro Phe His Tyr His Arg Ser Ala Ser Phe Ala Pro
100 105 110

Ser Asp Thr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 78
<211> 126
<212> PRT
<213> Homo sapiens

<400> 78

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1 5 10 15

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

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

Ala Ile Ile Tyr Tyr Asp Ser Ser Gln Arg Tyr Tyr Ala Asp Ser Val
50 55 60

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

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

Ala Arg Asp Leu Pro Phe His Tyr His Arg Ser Ala Ser Phe Ala Pro
100 105 110

```
Ser Asp Thr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120                 125


<210>  79
<211>  5
<212>  PRT
<213>  Homo sapiens

<400>  79

Ser Tyr Gly Met His
1               5


<210>  80
<211>  17
<212>  PRT
<213>  Homo sapiens

<400>  80

Ile Ile Tyr Tyr Asp Ser Ser Gln Arg Tyr Tyr Ala Asp Ser Val Lys
1               5                   10                  15


Gly



<210>  81
<211>  17
<212>  PRT
<213>  Homo sapiens

<400>  81

Asp Leu Pro Phe His Tyr His Arg Ser Ala Ser Phe Ala Pro Ser Asp
1               5                   10                  15


Thr



<210>  82
<211>  108
<212>  PRT
<213>  Homo sapiens

<400>  82

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


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


Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35                  40                  45


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

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

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Thr Ser Pro
85 90 95

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

<210> 83
<211> 108
<212> PRT
<213> Homo sapiens

<400> 83

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

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

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
35 40 45

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

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

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Thr Ser Pro
85 90 95

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

<210> 84
<211> 12
<212> PRT
<213> Homo sapiens

<400> 84

Arg Ala Ser Gln Ala Val Thr Asn Asn Tyr Leu Ala
1 5 10

<210> 85
<211> 7
<212> PRT
<213> Homo sapiens

<400> 85

Ala Ala Ser Ser Arg Ala Thr
1 5

<210> 86
<211> 9
<212> PRT
<213> Homo sapiens

<400> 86

Gln Gln Tyr Gly Thr Ser Pro Ile Thr
1 5

<210> 87
<211> 113
<212> PRT
<213> Homo sapiens

<400> 87

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

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

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

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

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

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

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

Ser

<210> 88
<211> 5
<212> PRT
<213> Homo sapiens

<400> 88

Ser Tyr Arg Met Asn
1 5

<210> 89
<211> 17
<212> PRT
<213> Homo sapiens

<400> 89

Tyr Ile Ser Thr Ser Ser Ser Thr Ile Tyr Tyr Ala Asp Ser Val Lys

1 5 10 15

Gly

<210> 90
<211> 4
<212> PRT
<213> Homo sapiens

<400> 90

Ala Phe Asp Tyr
1

<210> 91
<211> 12
<212> PRT
<213> Homo sapiens

<400> 91

Arg Ala Ser Gln Ser Val Ser Ser Ser Tyr Leu Ala
1 5 10

<210> 92
<211> 7
<212> PRT
<213> Homo sapiens

<400> 92

Gly Ala Ser Ser Arg Ala Thr
1 5

<210> 93
<211> 9
<212> PRT
<213> Homo sapiens

<400> 93

Gln Gln Tyr Gly Ser Ser Pro Phe Thr
1 5

<210> 94
<211> 414
<212> PRT
<213> Homo sapiens

<400> 94

Met Ser Glu Tyr Ile Arg Val Thr Glu Asp Glu Asn Asp Glu Pro Ile
1 5 10 15

Glu Ile Pro Ser Glu Asp Asp Gly Thr Val Leu Leu Ser Thr Val Thr
20 25 30

Ala Gln Phe Pro Gly Ala Cys Gly Leu Arg Tyr Arg Asn Pro Val Ser
35 40 45

```
Gln Cys Met Arg Gly Val Arg Leu Val Glu Gly Ile Leu His Ala Pro
    50                  55                  60

Asp Ala Gly Trp Gly Asn Leu Val Tyr Val Val Asn Tyr Pro Lys Asp
65                  70                  75                  80

Asn Lys Arg Lys Met Asp Glu Thr Asp Ala Ser Ser Ala Val Lys Val
                85                  90                  95

Lys Arg Ala Val Gln Lys Thr Ser Asp Leu Ile Val Leu Gly Leu Pro
            100                 105                 110

Trp Lys Thr Thr Glu Gln Asp Leu Lys Glu Tyr Phe Ser Thr Phe Gly
        115                 120                 125

Glu Val Leu Met Val Gln Val Lys Lys Asp Leu Lys Thr Gly His Ser
    130                 135                 140

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

Val Met Ser Gln Arg His Met Ile Asp Gly Arg Trp Cys Asp Cys Lys
                165                 170                 175

Leu Pro Asn Ser Lys Gln Ser Gln Asp Glu Pro Leu Arg Ser Arg Lys
            180                 185                 190

Val Phe Val Gly Arg Cys Thr Glu Asp Met Thr Glu Asp Glu Leu Arg
        195                 200                 205

Glu Phe Phe Ser Gln Tyr Gly Asp Val Met Asp Val Phe Ile Pro Lys
    210                 215                 220

Pro Phe Arg Ala Phe Ala Phe Val Thr Phe Ala Asp Asp Gln Ile Ala
225                 230                 235                 240

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

Ile Ser Asn Ala Glu Pro Lys His Asn Ser Asn Arg Gln Leu Glu Arg
            260                 265                 270

Ser Gly Arg Phe Gly Gly Asn Pro Gly Gly Phe Gly Asn Gln Gly Gly
        275                 280                 285

Phe Gly Asn Ser Arg Gly Gly Gly Ala Gly Leu Gly Asn Asn Gln Gly
    290                 295                 300

Ser Asn Met Gly Gly Gly Met Asn Phe Gly Ala Phe Ser Ile Asn Pro
305                 310                 315                 320
```

```
Ala Met Met Ala Ala Ala Gln Ala Ala Leu Gln Ser Ser Trp Gly Met
                325                 330                 335

Met Gly Met Leu Ala Ser Gln Gln Asn Gln Ser Gly Pro Ser Gly Asn
            340                 345                 350

Asn Gln Asn Gln Gly Asn Met Gln Arg Glu Pro Asn Gln Ala Phe Gly
        355                 360                 365

Ser Gly Asn Asn Ser Tyr Ser Gly Ser Asn Ser Gly Ala Ala Ile Gly
    370                 375                 380

Trp Gly Ser Ala Ser Asn Ala Gly Ser Gly Ser Gly Phe Asn Gly Gly
385                 390                 395                 400

Phe Gly Ser Ser Met Asp Ser Lys Ser Ser Gly Trp Gly Met
                405                 410
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<210> 95
<211> 372
<212> DNA
<213> Homo sapiens

<400> 95
gaggtgcagc tgttggagtc tgggggagac ttggtacagc ctgggggtc cctgagactc 60

tcctgtgcag cctctggatt cacctttagc agccaggcca tgagttgggt ccgccaggct 120

ccagggaagg ggctggagtg ggtctcggcc cttagtcgca ctggtgatta cacatggtac 180

gcagactccg tgaggggccg gttcaccgtc tccagagacg attccaaaaa catcttttat 240

ctggaaatga acagcctgag agccgaggac acggccgtgt attattgtgc gaaaaactac 300

tatagtagtt ttggttataa ttgggctgct tttcatatct ggggccaagg gacaatggtc 360

accgtctcct cg 372

<210> 96
<211> 327
<212> DNA
<213> Homo sapiens

<400> 96
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60

ctctcctgca gggccagtca ggatgttaac aacaactact tagcctggta ccagcagaaa 120

cctggccagg ctcccaggct cctcatctat ggtgcatccc gcagggccac tggcgtccca 180

gacaggttca gtggccgtgg gtctgggaca gacttcactc tcaccatcaa cagactggag 240

cctgaagatt ttgcaatgta tttctgtcag cagtatggtg gctcacctcc gtacactttt 300

ggccagggga ccaagctgga gatcaaa 327

<210> 97
<211> 342
<212> DNA
<213> Homo sapiens

<400> 97
gaggtgcagc tggtggagtc tgggggaggc ttagttcagc ctgggggtc cctgagaatc 60

tcctgcacaa cgtcaggatt cattttcagc gactattgga tgcactgggt ccgccaagct 120

ccagggaagg ggctcacttg ggtctcacgt attaatcttg atgggagtga caccatctat 180

gcggactccg tgaagggccg attcaccatt tccagagaca acgacaagaa cacactatat 240

ttacaaatga acagtctgag agtcgaggac acggctattt attactgtgc aaggtcaaga 300

aagagtgtct ggggccaagg gacaatggtc accgtctctt cg 342

<210> 98
<211> 330
<212> DNA
<213> Homo sapiens

<400> 98
cagtctgccc tgactcagcc tgcctccgtg tctgggtctc ctggacagtc gatcaccatc 60

tcctgcactg gaagcaacac tgacgttggt gcttatgact atgtctcctg gtcccaacaa 120

ctcccgggca aagcccccaa atttgtgatt tttgatgtcg atgttcggcc ctcagggatt 180

tctgatcgct tctctggctc caagtctggc aacacggcct ccctgaccat ctctgggctc 240

caggctgagg acgaggctga ttattattgc agttcatata caaagagcgg cactctggtt 300

ttcggtggag ggaccaaggt gaccgtcgta 330

<210> 99
<211> 357
<212> DNA
<213> Homo sapiens

<400> 99
caggtgcagc tggtgcaatc tggggctgag gtgaagaagc ctggggcctc agtgaaggtt 60

tcctgcaaga cctctggata ctccttcact agttatactt tacattgggt gcgccaggcc 120

cccggacaca ggcctgagtg gatgggatgg atcaacgctg ccttcattaa cacaaaatat 180

tcacagaagt tccagggcag aatcaccctt accagggaca cgtccgcgaa catagcctac 240

ctggagttga gaagcctgac aactgaggac acggctgtgt attactgtgc gagacgggct 300

tcagggagta acggtttgga cgtctggggc caagggacca cggtcaccgt ctcctcg 357

<210> 100
<211> 321
<212> DNA
<213> Homo sapiens

<400> 100
gacatccaga tgacccagtc gccatcctcc ctgtctgcat ctgtgggaga cagaatcacc 60

atcacttgcc aggcgagtcg tgacattacc aactatttaa attggtatca gcagaaacca 120

gggaaagccc ctaaactcct gatctacgat gcatcctatt tggaaacagg ggtcccatca 180

acgttcagtg gaagtggatc tggcacacat tttactttaa ccatcagcag cctccagcct 240

gacgattttg caacatatta ctgtcaacag tatgattctg tccccctcac tttcggcgga 300

gggaccaagg tggaaatcaa a 321

<210> 101
<211> 363
<212> DNA
<213> Homo sapiens

<400> 101
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaagtc cctgagactc 60

tcctgtgcag cgtctgggtt caccttcaga gatcatggca tgcactgggt ccgccaggct 120

ccaggcaaag ggctggagtg ggtggcagta atatggcttg atggaagtag tcgcttctat 180

gcagactccg tagaaggccg gttcaccatc tccagagaca actccaagaa tacactatat 240

ctacaactga cgagcctgag agccgaggac acggctattt attactgtgc gagagaccgt 300

gtggcatcag aagggactgc ttttgatgtc tggggccaag ggacaatggt caccgtctct 360

tcg 363

<210> 102
<211> 315
<212> DNA
<213> Homo sapiens

<400> 102
gaaattgtgc tgactcagtc tccagccacc ctgtccttgt ctccagggga aagagccacc 60

ctctcctgct gggccagtca gaatgttaat cattacttag tctggtatca acagagacct 120

ggccaggctc ccaggctcct cctctatgat acatccgtta gggccgctgg catcccagcc 180

aggttcattg gctctgggtc tgggacacac ttcactctca ccatcagcag cctggagcct 240

gaagattctg cagtttatta ctgtcagcac cgtagcgact ggacgttcgg ccaagggacc 300

aaggtggaga tcaaa 315

<210> 103
<211> 357
<212> DNA
<213> Homo sapiens

<400> 103
caggtgcagc tggtgcaatc tggtactgcg gtgaagaagc ctggggcctc agtgaaggtt 60

tcctgtaagg catctggatt cagtttcaac ggctattata tgcattgggt gcgacaggcc 120

cctggacagg ggcttgagtg gatgggagtc attaacccta atggtggcag tacaaactac 180

gcacaaaaat tcaagggtag aatcaccatg agcgcggaca cgcccgcgag gtcagtctcc 240

atggagttgg gcagtctgag atctgacgac acggccatgt attactgtgc gagacttccc 300

gtgaatatag aagtccttga cctctggggc cagggcaccc tggtcaccgt ctcctcg 357

<210> 104
<211> 339
<212> DNA
<213> Homo sapiens

<400> 104
gatattgtga tgacccagag tccagactcc ctggctgtgt ctctgggcga gagggccacc 60

atcaactgca ggtcgagcca gactgttttg ttcagctcca acgataagaa ttacttagca 120

tggtatcagc agaaaccagg acagcctcct aaattgctca tttactgggc atctgtccgg 180

gcatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cagtctcacc 240

atcaacggcc tgcaggctga agatgtggca gtttactatt gtcagcaatc ttctactgct 300

ccgctcacct tcggcggagg gaccaaggtg gaaatcaaa 339

<210> 105
<211> 402
<212> DNA
<213> Homo sapiens

<400> 105
caggtgcagc tggtgcaatc tggggctgag gtgaagaagc ctggggcctc agtgaaggtt 60

tcctgcaagg catctggata caccttcacc aactactata tgcactgggt gcgacaggcc 120

cctggacaag ggcttgagtg gatgggaata atcaatccta gtggtgggag gacaagctac 180

gcacagaagt tccagggcag agcctccatg accagggaca cgtccaccag cacagtctac 240

atggaggtga tcagcctgag atctgaggac acggccgtgt attactgtgc tagacaacgc 300

ccgtcgggat atagtggcta cgggccctca gagtcatacg gtaacccgac agatgatgct 360

tttgatgtct ggggccaagg gaccacggtc accgtctcct cg 402

<210> 106
<211> 327
<212> DNA
<213> Homo sapiens

<400> 106
tcctatgtgc tgactcagcc accctcggtg tcagtggccc caggacagac ggccaggatt 60

acgtgtgggg gaaacaacat tggaagtagg ggtgtacact ggtaccagca gaggccaggc 120

caggcccctg tgttggtcgt ctatgatgat agcgaccggc cctcagggat ccctgagcga 180

ttctctggct ccaactctgg ggacacggcc accctgacca tcagcagggt cgaagtcggg 240

gatgaggccg actattactg tcaggtgtgg gataatagta gtgatcatct tgtggttttc 300

ggcggaggga ccaagctgac cgtccta 327

<210> 107
<211> 390
<212> DNA
<213> Homo sapiens

<400> 107
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60

tcctgtgcag cctctggatt caccttcagt aattatgtta tgtattgggt ccgccaggct 120

ccaggcaagg ggctggagtg ggtggctttt atatcatatg atggaagcaa taaatactac 180

ccagactccg tgaagggccg attcaccatc tccagagaca attccatgaa cacgctgtat 240

ctgcaaatgg acagcctgag agctgaggac acggctgtct attactgtgc gagagacacg 300

tatcaatatg atagtagcac ttattacccg tacttctact actacggtat ggacgtctgg 360

ggccaaggga ccacggtcac cgtctcctcg 390

<210> 108
<211> 333
<212> DNA
<213> Homo sapiens

<400> 108
cagtctgccc tgactcagcc tgcctccgtg tctgggtctc ctggacagtc gatcaccatc 60

tcctgtattg gaaccagcag tgacgttggt ggttataact atgtctcctg gtaccagcag 120

cacccaggca aagcccccaa actcatgatt tatgaggtca gtaatcggcc ctcaggggtt 180

tctagtcgct tctcaggctc caagtctggc aacacggcct ccctgaccat ctctgggctc 240

cagtctgagg acgaggctga ttattactgc agctcatttg caagcagcag cacttctgtg 300

acgttcggcg gagggaccaa gctgaccgtc cta 333

<210> 109
<211> 387
<212> DNA
<213> Homo sapiens

<400> 109
gaggtgcagc tgttggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60

tcctgtgcag cctctggatt cacctttagt agttatgcca tgagttgggt ccgccaggct 120

ccagggaagg ggctggagtg ggtctcagct attagcggtg gaggtgatag aacttactcc 180

gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa caccctgtat 240

ctgcaaataa acagcctgag agttgaggac acggccgtat attactgtgc gcaaggggg 300

ggggggaaa tgaccgcagt aactatggac gggacctact acggtatgga cgtctggggc 360

caagggacca cggtcaccgt ctcctcg 387

<210> 110
<211> 330
<212> DNA
<213> Homo sapiens

<400> 110
cagtctgccc tgactcagcc tcgctcagtg tccgggtctc ctggacagtc aatcaccatc 60

tcctgcactg gaaccagcag taatgttggt acttataagt ttgtctcctg gtaccaacaa 120

caccccggca aagcccccaa actcatgatt tatgatgtca ctaagcggcc ctcaggggtc 180

cctgatcgct tctctggctc caagtctggc aacacggcct ccctgaccat ctctggactc 240

caggctgaag atgaggctga ttattactgc tgctcatatg caggcagtta cacttatgtc 300

ttcggaagtg ggaccaaggt caccgtccta 330

<210> 111
<211> 357
<212> DNA
<213> Homo sapiens

<400> 111
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggatgtc cctgagactc 60

tcctgtgcag cctctggatt cagcttcagt agtcatggca tgcactgggt ccgccagact 120

ccaggcaagg ggctggagtg gttggcagta atttcatatg atgcaagtaa caaaagttat 180

gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa gacgctgtat 240

ttgcaaatgg acagcctgag agttgaagac acggctctgt attactgtgc gaatgcgttc 300

agcagttcgg catctggggg ctactggggc cagggcaccc tggtcaccgt ctcctcg 357

<210> 112
<211> 339
<212> DNA
<213> Homo sapiens

<400> 112
gatgttgtga tgactcagtc tccactctcc ctgcccgtca cccttggaca gccggcctcc 60

atctcctgca ggtccagtca aagcctcgtt cacagtgatg gagtcaccta cttgaattgg 120

tttcaacaga ggccaggcca atctccaagg cgcctaattt ataaggtttc taatcgggac 180

tctggggtcc cagacagatt cagcggcagt gggtcaggca ctgatttcac actggaaatc 240

agcagggtgg aggctgagga tgttgggatt tattactgca tgcaaggtac acactggcct 300

ccctggacgt tcggccaagg gaccaaggtg gaaatcaaa 339

<210> 113
<211> 378
<212> DNA
<213> Homo sapiens

<400> 113
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60

tcctgtgcag cgtctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120

ccaggcaagg ggctggagtg ggtggcgatt atatactatg attcaagtca gagatactat 180

gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cgcgctgtat 240

ctgcaaatga atagcctgag ggccgaggac accgctctgt attactgtgc gagagatctt 300

ccgtttcact atcatagaag tgcctctttc gcaccttcgg acacctgggg ccagggaacc 360

ctggtcaccg tctcctcg 378

<210> 114
<211> 324
<212> DNA
<213> Homo sapiens

<400> 114
gaaattgtgc tgactcagtc tccaggcacc ctgtctttgt ctccggggga aagagccacc 60

ctctcctgca gggccagtca ggctgttacc aacaactact tagcctggta ccagcaaaaa 120

cctggccagg ctcccagact cctcgtctat gctgcatcca gcagggccac tggcatccca 180

gacagattct atggcagtgg gtctggggcg gacttcactc tcaccatcag cagactggag 240

cctgaagatt ttgcagtgta ttactgtcag caatatggta cctcaccgat caccttcggc 300

caagggacac gactggagat taaa 324

<210> 115
<211> 339
<212> DNA
<213> Homo sapiens

<400> 115
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60

tcctgtgcag cctctggatt caccttcagt agctatagga tgaactgggt ccgtcaggct 120

ccagggaagg ggctggagtg ggtttcatac attagtacta gtagtagtac catatactac 180

gcagactctg tgaagggccg attcaccatc tccagagaca atgccaagaa ctcactgtat 240

ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagcattc 300

gactactggg gccagggaac cctggtcacc gtctcctcg 339

<210> 116
<211> 324
<212> DNA
<213> Homo sapiens

<400> 116
gaaattgtgc tgactcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60

ctctcctgca gggccagtca gagtgttagc agcagctact tagcctggta ccagcagaaa 120

cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180

gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcat cagactggag 240

cctgaagact ttgcagtgta ttactgtcag cagtatggta gctcaccgtt cacttttggc 300

caggggacca aggtggagat caaa 324

<210> 117
<211> 122
<212> PRT
<213> Artificial

<220>
<223> His-huTDP43 domain I

<400> 117

Met Arg Gly Ser His His His His His His Gly Leu Val Pro Arg Gly
1 5 10 15

Ser Ser Glu Tyr Ile Arg Val Thr Glu Asp Glu Asn Asp Glu Pro Ile
20 25 30

Glu Ile Pro Ser Glu Asp Asp Gly Thr Val Leu Leu Ser Thr Val Thr
35 40 45

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

Gln Cys Met Arg Gly Val Arg Leu Val Glu Gly Ile Leu His Ala Pro
65 70 75 80

```
Asp Ala Gly Trp Gly Asn Leu Val Tyr Val Val Asn Tyr Pro Lys Asp
                85                  90                  95


Asn Lys Arg Lys Met Asp Glu Thr Asp Ala Ser Ser Ala Val Lys Val
            100                 105                 110


Lys Arg Ala Val Gln Lys Thr Ser Asp Leu
        115                 120


<210>  118
<211>  123
<212>  PRT
<213>  Artificial

<220>
<223>  His-huTDP43 domain II

<400>  118

Met Arg Gly Ser His His His His His His Gly Leu Val Pro Arg Gly
1               5                   10                  15


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


Lys Thr Thr Glu Gln Asp Leu Lys Glu Tyr Phe Ser Thr Phe Gly Glu
        35                  40                  45


Val Leu Met Val Gln Val Lys Lys Asp Leu Lys Thr Gly His Ser Lys
    50                  55                  60


Gly Phe Gly Phe Val Arg Phe Thr Glu Tyr Glu Thr Gln Val Lys Val
65                  70                  75                  80


Met Ser Gln Arg His Met Ile Asp Gly Arg Trp Cys Asp Cys Lys Leu
                85                  90                  95


Pro Asn Ser Lys Gln Ser Gln Asp Glu Pro Leu Arg Ser Arg Lys Val
            100                 105                 110


Phe Val Gly Arg Cys Thr Glu Asp Met Thr Glu
        115                 120


<210>  119
<211>  108
<212>  PRT
<213>  Artificial

<220>
<223>  His-huTDP43 domain III

<400>  119

Met Arg Gly Ser His His His His His His Gly Leu Val Pro Arg Gly
1               5                   10                  15
```

```
Ser Ser Gln Asp Glu Pro Leu Arg Ser Arg Lys Val Phe Val Gly Arg
            20                  25                  30

Cys Thr Glu Asp Met Thr Glu Asp Glu Leu Arg Glu Phe Phe Ser Gln
        35                  40                  45

Tyr Gly Asp Val Met Asp Val Phe Ile Pro Lys Pro Phe Arg Ala Phe
    50                  55                  60

Ala Phe Val Thr Phe Ala Asp Asp Gln Ile Ala Gln Ser Leu Cys Gly
65                  70                  75                  80

Glu Asp Leu Ile Ile Lys Gly Ile Ser Val His Ile Ser Asn Ala Glu
                85                  90                  95

Pro Lys His Asn Ser Asn Arg Gln Leu Glu Arg Ser
            100                 105
```

<210> 120
<211> 174
<212> PRT
<213> Artificial

<220>
<223> His-huTDP43 domain IV

<400> 120

```
Met Arg Gly Ser His His His His His His Gly Leu Val Pro Arg Gly
1               5                   10                  15

Ser Ser Asn Ala Glu Pro Lys His Asn Ser Asn Arg Gln Leu Glu Arg
            20                  25                  30

Ser Gly Arg Phe Gly Gly Asn Pro Gly Gly Phe Gly Asn Gln Gly Gly
        35                  40                  45

Phe Gly Asn Ser Arg Gly Gly Gly Ala Gly Leu Gly Asn Asn Gln Gly
    50                  55                  60

Ser Asn Met Gly Gly Gly Met Asn Phe Gly Ala Phe Ser Ile Asn Pro
65                  70                  75                  80

Ala Met Met Ala Ala Ala Gln Ala Ala Leu Gln Ser Ser Trp Gly Met
                85                  90                  95

Met Gly Met Leu Ala Ser Gln Gln Asn Gln Ser Gly Pro Ser Gly Asn
            100                 105                 110

Asn Gln Asn Gln Gly Asn Met Gln Arg Glu Pro Asn Gln Ala Phe Gly
        115                 120                 125

Ser Gly Asn Asn Ser Tyr Ser Gly Ser Asn Ser Gly Ala Ala Ile Gly
    130                 135                 140
```

```
Trp Gly Ser Ala Ser Asn Ala Gly Ser Gly Ser Gly Phe Asn Gly Gly
145                 150                 155                 160


Phe Gly Ser Ser Met Asp Ser Lys Ser Ser Gly Trp Gly Met
                165                 170


<210>  121
<211>  430
<212>  PRT
<213>  Artificial

<220>
<223>  His-huTDP43 full-length

<400>  121

Met Arg Gly Ser His His His His His His Gly Leu Val Pro Arg Gly
1               5                   10                  15


Ser Ser Glu Tyr Ile Arg Val Thr Glu Asp Glu Asn Asp Glu Pro Ile
            20                  25                  30


Glu Ile Pro Ser Glu Asp Asp Gly Thr Val Leu Leu Ser Thr Val Thr
        35                  40                  45


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


Gln Cys Met Arg Gly Val Arg Leu Val Glu Gly Ile Leu His Ala Pro
65                  70                  75                  80


Asp Ala Gly Trp Gly Asn Leu Val Tyr Val Val Asn Tyr Pro Lys Asp
                85                  90                  95


Asn Lys Arg Lys Met Asp Glu Thr Asp Ala Ser Ser Ala Val Lys Val
            100                 105                 110


Lys Arg Ala Val Gln Lys Thr Ser Asp Leu Ile Val Leu Gly Leu Pro
        115                 120                 125


Trp Lys Thr Thr Glu Gln Asp Leu Lys Glu Tyr Phe Ser Thr Phe Gly
    130                 135                 140


Glu Val Leu Met Val Gln Val Lys Lys Asp Leu Lys Thr Gly His Ser
145                 150                 155                 160


Lys Gly Phe Gly Phe Val Arg Phe Thr Glu Tyr Glu Thr Gln Val Lys
                165                 170                 175


Val Met Ser Gln Arg His Met Ile Asp Gly Arg Trp Cys Asp Cys Lys
            180                 185                 190


Leu Pro Asn Ser Lys Gln Ser Gln Asp Glu Pro Leu Arg Ser Arg Lys
        195                 200                 205
```

```
Val Phe Val Gly Arg Cys Thr Glu Asp Met Thr Glu Asp Glu Leu Arg
    210                 215                 220

Glu Phe Phe Ser Gln Tyr Gly Asp Val Met Asp Val Phe Ile Pro Lys
225                 230                 235                 240

Pro Phe Arg Ala Phe Ala Phe Val Thr Phe Ala Asp Asp Gln Ile Ala
                245                 250                 255

Gln Ser Leu Cys Gly Glu Asp Leu Ile Ile Lys Gly Ile Ser Val His
            260                 265                 270

Ile Ser Asn Ala Glu Pro Lys His Asn Ser Asn Arg Gln Leu Glu Arg
        275                 280                 285

Ser Gly Arg Phe Gly Gly Asn Pro Gly Gly Phe Gly Asn Gln Gly Gly
    290                 295                 300

Phe Gly Asn Ser Arg Gly Gly Gly Ala Gly Leu Gly Asn Asn Gln Gly
305                 310                 315                 320

Ser Asn Met Gly Gly Gly Met Asn Phe Gly Ala Phe Ser Ile Asn Pro
                325                 330                 335

Ala Met Met Ala Ala Ala Gln Ala Ala Leu Gln Ser Ser Trp Gly Met
            340                 345                 350

Met Gly Met Leu Ala Ser Gln Gln Asn Gln Ser Gly Pro Ser Gly Asn
        355                 360                 365

Asn Gln Asn Gln Gly Asn Met Gln Arg Glu Pro Asn Gln Ala Phe Gly
    370                 375                 380

Ser Gly Asn Asn Ser Tyr Ser Gly Ser Asn Ser Gly Ala Ala Ile Gly
385                 390                 395                 400

Trp Gly Ser Ala Ser Asn Ala Gly Ser Gly Ser Gly Phe Asn Gly Gly
                405                 410                 415

Phe Gly Ser Ser Met Asp Ser Lys Ser Ser Gly Trp Gly Met
            420                 425                 430


<210>  122
<211>  108
<212>  PRT
<213>  Homo sapiens

<400>  122

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

```
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
            20                  25                  30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35                  40                  45

Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
    50                  55                  60

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

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

Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105
```

<210> 123
<211> 11
<212> PRT
<213> Homo sapiens

<400> 123

```
Gln Tyr Gly Asp Val Met Asp Val Phe Ile Pro
1               5                   10
```

<210> 124
<211> 11
<212> PRT
<213> Homo sapiens

<400> 124

```
Ala Ala Ile Gly Trp Gly Ser Ala Ser Asn Ala
1               5                   10
```

<210> 125
<211> 11
<212> PRT
<213> Homo sapiens

<400> 125

```
Asp Met Thr Glu Asp Glu Leu Arg Glu Phe Phe
1               5                   10
```

<210> 126
<211> 7
<212> PRT
<213> Homo sapiens

<400> 126

```
Glu Asp Glu Asn Asp Glu Pro
1               5
```

<210> 127

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

<400> 127

Val Gln Val Lys Lys Asp Leu
1 5

<210> 128
<211> 7
<212> PRT
<213> Homo sapiens

<400> 128

Lys Glu Tyr Phe Ser Thr Phe
1 5

<210> 129
<211> 130
<212> PRT
<213> Homo sapiens

<400> 129

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1 5 10 15

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

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

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

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

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

Ala Arg Asp Thr Tyr Gln Tyr Asp Ser Ser Thr Tyr Tyr Pro Tyr Phe
100 105 110

Tyr Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val
115 120 125

Ser Ser
130

<210> 130
<211> 113
<212> PRT
<213> Homo sapiens

<400> 130

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

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

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

Ala Asn Ile Lys Gln Asp Gly Ser Glu Lys Tyr Tyr Val Asp Ser Val
50 55 60

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

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

Ala Ser Pro Pro Gly Trp Trp Gly Gln Gly Thr Leu Val Thr Val Ser
100 105 110

Ser

<210> 131
<211> 10
<212> PRT
<213> Homo sapiens

<400> 131

Gly Phe Thr Phe Ser Thr Tyr Tyr Met Ser
1 5 10

<210> 132
<211> 17
<212> PRT
<213> Homo sapiens

<400> 132

Asn Ile Lys Gln Asp Gly Ser Glu Lys Tyr Tyr Val Asp Ser Val Lys
1 5 10 15

Gly

<210> 133
<211> 4
<212> PRT
<213> Homo sapiens

<400> 133

Pro Pro Gly Trp
1

<210> 134
<211> 112
<212> PRT
<213> Homo sapiens

<400> 134

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

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

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

Pro Gln Leu Leu Ile Tyr Glu 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 Val Gly Val Tyr Tyr Cys Met Gln Ser
85 90 95

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

<210> 135
<211> 16
<212> PRT
<213> Homo sapiens

<400> 135

Lys Ser Ser Gln Ser Leu Leu His Ser Asp Gly Lys Thr Tyr Leu Tyr
1 5 10 15

<210> 136
<211> 7
<212> PRT
<213> Homo sapiens

<400> 136

Glu Val Ser Asn Arg Phe Ser
1 5

<210> 137
<211> 9
<212> PRT
<213> Homo sapiens

<400> 137

Met Gln Ser Ile Gln Leu Pro Val Thr
1 5

<210> 138
<211> 119
<212> PRT
<213> Homo sapiens

<400> 138

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 Ile Phe Thr Asp Tyr
20 25 30

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

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

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

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

Ala Arg Leu Lys Tyr Ser Val Pro Asp Ser Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser
115

<210> 139
<211> 10
<212> PRT
<213> Homo sapiens

<400> 139

Gly Tyr Ile Phe Thr Asp Tyr Phe Ile His
1 5 10

<210> 140
<211> 17
<212> PRT
<213> Homo sapiens

<400> 140

Trp Ile Lys Pro Lys Ser Gly Gly Thr Asp Tyr Ala Glu Lys Phe Gln
1 5 10 15

Gly

<210> 141
<211> 10
<212> PRT

<213> Homo sapiens

<400> 141

Leu Lys Tyr Ser Val Pro Asp Ser Asp Tyr
1 5 10

<210> 142
<211> 112
<212> PRT
<213> Homo sapiens

<400> 142

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

Gln Ser Ala Ser Ile Ser Cys Arg Ser Ser Gln Gly Leu Val His Ser
20 25 30

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

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

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

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

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

<210> 143
<211> 16
<212> PRT
<213> Homo sapiens

<400> 143

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

<210> 144
<211> 7
<212> PRT
<213> Homo sapiens

<400> 144

Lys Val Phe Asn Arg Asp Ser
1 5

<210> 145
<211> 9
<212> PRT
<213> Homo sapiens

<400> 145

Met Gln Gly Thr Leu Trp Pro Leu Thr
1 5

<210> 146
<211> 126
<212> PRT
<213> Homo sapiens

<400> 146

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

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

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

Gly Arg Ile Lys Ser Lys Asn Asp Gly Gly Thr Thr Glu Tyr Ala Ala
50 55 60

Pro Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr
65 70 75 80

Val Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Ala Gly Val Tyr
85 90 95

Tyr Cys Thr Thr Asp Pro Tyr His Tyr Phe Asp Met Gly Gly Pro Gly
100 105 110

Phe Gly Pro Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 147
<211> 10
<212> PRT
<213> Homo sapiens

<400> 147

Gly Phe Asn Phe Ser Asn Val Trp Ile Ser
1 5 10

<210> 148
<211> 19
<212> PRT
<213> Homo sapiens

<400> 148

Arg Ile Lys Ser Lys Asn Asp Gly Gly Thr Thr Glu Tyr Ala Ala Pro
1 5 10 15

Val Lys Gly

<210> 149
<211> 15
<212> PRT
<213> Homo sapiens

<400> 149

Asp Pro Tyr His Tyr Phe Asp Met Gly Gly Pro Gly Phe Gly Pro
1 5 10 15

<210> 150
<211> 113
<212> PRT
<213> Homo sapiens

<400> 150

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 Gly Gln Ser Val Leu Tyr Arg
20 25 30

Ser Asn Asn Arg Asn Tyr Ile 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 Asn Arg Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile
100 105 110

Lys

<210> 151
<211> 113
<212> PRT
<213> Homo sapiens

<400> 151

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 Ser Tyr Ser
20 25 30

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

Lys
```

<210> 152
<211> 17
<212> PRT
<213> Homo sapiens

<400> 152

```
Lys Ser Ser Gln Ser Val Ser Tyr Ser Ser Asn Asn Lys Asn Phe Leu
1               5                   10                  15

Ser
```

<210> 153
<211> 7
<212> PRT
<213> Homo sapiens

<400> 153

```
Trp Ala Ser Thr Arg Glu Ser
1               5
```

<210> 154
<211> 9
<212> PRT
<213> Homo sapiens

<400> 154

```
Gln Gln Tyr Ser Ser Leu Pro Ile Ser
1               5
```

<210> 155
<211> 123
<212> PRT
<213> Homo sapiens

<400> 155

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

```
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Leu Thr Phe Ser Arg His
            20                  25                  30

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

Ala Ile Ser Ser Gly Ser Gly Gly Asn Thr Tyr Tyr Ala Ala Ser Val
    50                  55                  60

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

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

Ala Lys Glu Val Leu Glu Trp Ser Leu Leu Ser Arg Tyr Met Asp Val
            100                 105                 110

Trp Gly Lys Gly Thr Thr Val Thr Val Ser Ser
        115                 120


<210>  156
<211>  10
<212>  PRT
<213>  Homo sapiens

<400>  156

Gly Leu Thr Phe Ser Arg His Ala Phe Ser
1               5                   10


<210>  157
<211>  17
<212>  PRT
<213>  Homo sapiens

<400>  157

Ile Ser Ser Gly Ser Gly Gly Asn Thr Tyr Tyr Ala Ala Ser Val Lys
1               5                   10                  15

Gly



<210>  158
<211>  14
<212>  PRT
<213>  Homo sapiens

<400>  158

Glu Val Leu Glu Trp Ser Leu Leu Ser Arg Tyr Met Asp Val
1               5                   10


<210>  159
<211>  110
```

<212> PRT
<213> Homo sapiens

<400> 159

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

Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Gly Asn
20 25 30

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

Val Tyr Ser Thr Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
50 55 60

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln
65 70 75 80

Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Thr Trp Asp Asp Ser Leu
85 90 95

Asn Gly Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105 110

<210> 160
<211> 13
<212> PRT
<213> Homo sapiens

<400> 160

Ser Gly Ser Ser Ser Asn Ile Gly Gly Asn Thr Val Asn
1 5 10

<210> 161
<211> 7
<212> PRT
<213> Homo sapiens

<400> 161

Ser Thr Asn Gln Arg Pro Ser
1 5

<210> 162
<211> 11
<212> PRT
<213> Homo sapiens

<400> 162

Ala Thr Trp Asp Asp Ser Leu Asn Gly Trp Val
1 5 10

<210> 163
<211> 112
<212> PRT

<213> Homo sapiens

<400> 163

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 Thr Asp 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 His Asp Ser Gly Thr Thr Arg Tyr Asn Pro Ser Leu Thr
50 55 60

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

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

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

<210> 164
<211> 10
<212> PRT
<213> Homo sapiens

<400> 164

Gly Gly Ser Ile Thr Asp Tyr Tyr Trp Ser
1 5 10

<210> 165
<211> 16
<212> PRT
<213> Homo sapiens

<400> 165

Tyr Ile His Asp Ser Gly Thr Thr Arg Tyr Asn Pro Ser Leu Thr Ser
1 5 10 15

<210> 166
<211> 4
<212> PRT
<213> Homo sapiens

<400> 166

Val Pro Asp Tyr
1

<210> 167
<211> 113
<212> PRT
<213> Homo sapiens

<400> 167

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 Asn
20 25 30

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

Pro Pro Lys Val Leu Ile Tyr Trp Ala Ser Thr Arg Glu Phe 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 His Gln
85 90 95

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

Lys

<210> 168
<211> 17
<212> PRT
<213> Homo sapiens

<400> 168

Lys Ser Ser Gln Ser Val Leu Tyr Asn Ser Asp Asn Lys Asn Tyr Leu
1 5 10 15

Ala

<210> 169
<211> 7
<212> PRT
<213> Homo sapiens

<400> 169

Trp Ala Ser Thr Arg Glu Phe
1 5

<210> 170
<211> 9
<212> PRT
<213> Homo sapiens

<400> 170

His Gln Tyr Tyr Ser Val Pro Phe Thr

1 5

<210> 171
<211> 116
<212> PRT
<213> Homo sapiens

<400> 171

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

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

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

Trp Ile Gly Tyr Ile Ser Phe Phe Gly Ser Ser Asn Tyr Asn Pro Ser
50 55 60

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

Ser Leu Asn Leu Lys Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Phe
85 90 95

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

Thr Val Ser Ser
115

<210> 172
<211> 12
<212> PRT
<213> Homo sapiens

<400> 172

Gly Val Ser Val Gly Ser Gly Asp Tyr Tyr Trp Ser
1 5 10

<210> 173
<211> 16
<212> PRT
<213> Homo sapiens

<400> 173

Tyr Ile Ser Phe Phe Gly Ser Ser Asn Tyr Asn Pro Ser Leu Lys Gly
1 5 10 15

<210> 174
<211> 6
<212> PRT
<213> Homo sapiens

<400> 174

Gly Asn Ala Tyr Ser Phe
1 5

<210> 175
<211> 108
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<400> 175

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

Ser Ile Thr Ile Ser Cys Thr Gly Thr Ser Ser Asp Ile Gly Thr His
20 25 30

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

Ile Ile Tyr Glu Ile Phe Glu Arg Pro Ser Gly Ile Ser Ser Arg Phe
50 55 60

Thr Gly Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu
65 70 75 80

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

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

<210> 176
<211> 14
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<400> 176

Thr Gly Thr Ser Ser Asp Ile Gly Thr His Asn Leu Val Ser
1 5 10

<210> 177
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<400> 177

Glu Ile Phe Glu Arg Pro Ser
1 5

<210> 178
<211> 8
<212> PRT
<213> Homo sapiens

<400> 178

Cys Ala Tyr Ser Val Thr Val Ile
1 5

<210> 179
<211> 112
<212> PRT
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<400> 179

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

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

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

Ser Arg Ile Ser Ser Asp Gly Ala Ser Val Ser Tyr Ala Asp Phe Val
50 55 60

Glu Gly Arg Phe Thr Ile Ser Arg Gly Asn Ala Arg Asn Thr Leu Phe
65 70 75 80

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

Ala Met Gly Val Val Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
100 105 110

<210> 180
<211> 10
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<400> 180

Gly Phe Asn Leu Gly Asp Tyr Trp Met His
1 5 10

<210> 181
<211> 17
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<213> Homo sapiens

<400> 181

Arg Ile Ser Ser Asp Gly Ala Ser Val Ser Tyr Ala Asp Phe Val Glu
1 5 10 15

Gly

<210> 182
<211> 3
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<213> Homo sapiens

<400> 182

Gly Val Val
1

<210> 183
<211> 108
<212> PRT
<213> Homo sapiens

<400> 183

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

Thr Ala Thr Ile Ser Cys Ser Gly Asp Ala Leu Pro Lys Arg Tyr Ala
20 25 30

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

Glu Asp Asn Lys Arg Pro Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser
50 55 60

Ser Ser Gly Thr Met Ala Thr Leu Thr Ile Thr Gly Ala Gln Val Asp
65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Tyr Ser Ser Asp Asn Ser Asp Thr Tyr
85 90 95

Ser Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105

<210> 184
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<400> 184

Ser Gly Asp Ala Leu Pro Lys Arg Tyr Ala Tyr
1 5 10

<210> 185
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<400> 185

Glu Asp Asn Lys Arg Pro Ser
1 5

<210> 186
<211> 11
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<213> Homo sapiens

<400> 186

Tyr Ser Ser Asp Asn Ser Asp Thr Tyr Ser Val
1 5 10

<210> 187
<211> 126
<212> PRT
<213> Homo sapiens

<400> 187

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Arg Phe Thr Phe Ser Ser Tyr
20 25 30

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

Ala Leu Ile Tyr Tyr Asp Ala Thr Gln Lys Tyr Tyr Ala Asp Ser Val
50 55 60

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

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

Ala Arg Asp Leu Pro Tyr His Tyr His Arg Ser Ala Ser Phe Ala Pro
100 105 110

Ala Asp Thr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 188
<211> 10
<212> PRT
<213> Homo sapiens

<400> 188

Arg Phe Thr Phe Ser Ser Tyr Gly Met His
1 5 10

<210> 189
<211> 17
<212> PRT
<213> Homo sapiens

<400> 189

Leu Ile Tyr Tyr Asp Ala Thr Gln Lys Tyr Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 190
<211> 17
<212> PRT
<213> Homo sapiens

<400> 190

Asp Leu Pro Tyr His Tyr His Arg Ser Ala Ser Phe Ala Pro Ala Asp
1 5 10 15

Thr

<210> 191
<211> 108
<212> PRT
<213> Homo sapiens

<400> 191

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

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

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
35 40 45

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

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

Pro Glu Asp Phe Val Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Pro
85 90 95

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

<210> 192
<211> 12
<212> PRT
<213> Homo sapiens

<400> 192

Arg Ala Ser Gln Thr Ile Ser Asn Asn Tyr Leu Ala
1 5 10

<210> 193
<211> 7
<212> PRT
<213> Homo sapiens

<400> 193

Ala Ala Ser Ser Arg Ala Thr
1 5

<210> 194
<211> 9
<212> PRT
<213> Homo sapiens

<400> 194

Gln Gln Tyr Gly Ser Ser Pro Ile Thr
1 5

<210> 195
<211> 120
<212> PRT
<213> Homo sapiens

<400> 195

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

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

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

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

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

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

Lys Ala Asn Tyr Gly Gly Asn Arg Phe Gly Leu Asp Val Trp Gly Gln
100 105 110

Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 196
<211> 10
<212> PRT
<213> Homo sapiens

<400> 196

Gly Phe Thr Phe Ser Ser Tyr Ser Met Ser
1 5 10

<210> 197
<211> 16

<212> PRT
<213> Homo sapiens

<400> 197

Thr Val Gly Tyr Gly Gly Thr Ile Tyr Tyr Ala Asp Ser Val Lys Gly
1 5 10 15

<210> 198
<211> 12
<212> PRT
<213> Homo sapiens

<400> 198

Ala Asn Tyr Gly Gly Asn Arg Phe Gly Leu Asp Val
1 5 10

<210> 199
<211> 111
<212> PRT
<213> Homo sapiens

<400> 199

Gln Ser Ala Leu Thr Gln Pro Pro Ser Ala Ser Gly Ser Pro Gly Gln
1 5 10 15

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

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

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

Ser Gly Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Val Ser Gly Leu
65 70 75 80

Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Ser Ser Tyr Ala Gly Ser
85 90 95

Asn Asn Leu Gly Val Phe Gly Thr Gly Thr Glu Val Thr Val Leu
100 105 110

<210> 200
<211> 14
<212> PRT
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<400> 200

Thr Gly Thr Ser Ser Asp Val Gly Gly Tyr Asn Tyr Val Ser
1 5 10

<210> 201
<211> 7
<212> PRT

<213> Homo sapiens

<400> 201

Glu Val Ser Lys Arg Pro Ser
1 5

<210> 202
<211> 11
<212> PRT
<213> Homo sapiens

<400> 202

Ser Ser Tyr Ala Gly Ser Asn Asn Leu Gly Val
1 5 10

<210> 203
<211> 120
<212> PRT
<213> Homo sapiens

<400> 203

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

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

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

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

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

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

Ala Lys Ala His His Leu Tyr Asn Lys Asn Phe Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 204
<211> 10
<212> PRT
<213> Homo sapiens

<400> 204

Gly Phe Thr Phe Arg Asn Tyr Ala Met Ala
1 5 10

<210> 205
<211> 17
<212> PRT
<213> Homo sapiens

<400> 205

Ala Ile Pro Ala Arg Gly Asp Lys Thr Tyr Tyr Ala Asp Ser Val Arg
1 5 10 15

Gly

<210> 206
<211> 11
<212> PRT
<213> Homo sapiens

<400> 206

Ala His His Leu Tyr Asn Lys Asn Phe Asp Tyr
1 5 10

<210> 207
<211> 104
<212> PRT
<213> Homo sapiens

<400> 207

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

Glu Thr Val Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
20 25 30

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

Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
50 55 60

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

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln His Tyr Gly Thr Phe Gly
85 90 95

Gln Gly Thr Lys Val Asp Ile Lys
100

<210> 208
<211> 12
<212> PRT
<213> Homo sapiens

<400> 208

Arg Ala Ser Gln Ser Val Ser Ser Ser Asn Leu Ala

1 5 10

<210> 209
<211> 7
<212> PRT
<213> Homo sapiens

<400> 209

Gly Ala Ser Ser Arg Ala Thr
1 5

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

<400> 210

Gln His Tyr Gly Thr
1 5

<210> 211
<211> 123
<212> PRT
<213> Homo sapiens

<400> 211

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

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

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

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

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

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

Ala Lys Asp Arg Trp Leu Thr Gly Arg Thr Gly Gly Val Phe Asp Ile
100 105 110

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 212
<211> 10
<212> PRT
<213> Homo sapiens

<400> 212

Gly Phe Thr Phe Ser Thr Tyr Val Met Ser
1 5 10

<210> 213
<211> 17
<212> PRT
<213> Homo sapiens

<400> 213

Ala Ile Ser Arg Arg Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 214
<211> 14
<212> PRT
<213> Homo sapiens

<400> 214

Asp Arg Trp Leu Thr Gly Arg Thr Gly Gly Val Phe Asp Ile
1 5 10

<210> 215
<211> 107
<212> PRT
<213> Homo sapiens

<400> 215

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

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

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

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

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

Glu Asp Thr Ala Thr Tyr Tyr Cys Gln Gln Tyr Asp Asn Leu Pro Leu
85 90 95

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

<210> 216
<211> 11

<212> PRT
<213> Homo sapiens

<400> 216

Gln Ala Ser Gln Asp Ile Ser Asn Tyr Leu Asn
1 5 10

<210> 217
<211> 7
<212> PRT
<213> Homo sapiens

<400> 217

Asp Ala Ser Asn Leu Glu Thr
1 5

<210> 218
<211> 9
<212> PRT
<213> Homo sapiens

<400> 218

Gln Gln Tyr Asp Asn Leu Pro Leu Thr
1 5

<210> 219
<211> 120
<212> PRT
<213> Homo sapiens

<400> 219

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

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

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

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

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

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

Ala Lys Gly Leu Gly Pro Val Ala Ala Ile Gly Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 220
<211> 10
<212> PRT
<213> Homo sapiens

<400> 220

Gly Tyr Thr Phe Ser Tyr Tyr Ala Met Ser
1 5 10

<210> 221
<211> 17
<212> PRT
<213> Homo sapiens

<400> 221

Thr Ile Gly Asp Ser Gly Ser Thr Thr His Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 222
<211> 11
<212> PRT
<213> Homo sapiens

<400> 222

Gly Leu Gly Pro Val Ala Ala Ile Gly Asp Tyr
1 5 10

<210> 223
<211> 110
<212> PRT
<213> Homo sapiens

<400> 223

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

Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn
20 25 30

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

Val Tyr Arg Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Val Ser
50 55 60

Gly Ser Lys Ser Gly Ser Ser Ala Ser Leu Ala Ile Ser Gly Leu Arg
65 70 75 80

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu
85 90 95

```
Arg Gly Tyr Val Phe Gly Thr Gly Thr Lys Val Thr Val Leu
            100                 105                 110


<210>  224
<211>  13
<212>  PRT
<213>  Homo sapiens

<400>  224

Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn Asn Val Tyr
1               5                   10


<210>  225
<211>  7
<212>  PRT
<213>  Homo sapiens

<400>  225

Arg Asn Asn Gln Arg Pro Ser
1               5


<210>  226
<211>  11
<212>  PRT
<213>  Homo sapiens

<400>  226

Ala Ala Trp Asp Asp Ser Leu Arg Gly Tyr Val
1               5                   10


<210>  227
<211>  115
<212>  PRT
<213>  Homo sapiens

<400>  227

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1               5                   10                  15


Ser Leu Arg Leu Ser Cys Val Ala Ser Gly Phe Thr Phe Asp Asn Tyr
            20                  25                  30


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


Ala Val Ile Ser Tyr Gly Gly Asp His Gln Phe Tyr Gly Asp Ser Val
    50                  55                  60


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


Leu Gln Met His Ser Leu Arg Pro Asp Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95


Ala Thr Gly Val Thr Pro Asp Phe Trp Gly Gln Gly Thr Leu Val Thr
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100 105 110

Val Ser Ser
115

<210> 228
<211> 5
<212> PRT
<213> Homo sapiens

<400> 228

Asn Tyr Gly Met His
1 5

<210> 229
<211> 17
<212> PRT
<213> Homo sapiens

<400> 229

Val Ile Ser Tyr Gly Gly Asp His Gln Phe Tyr Gly Asp Ser Val Lys
1 5 10 15

Asp

<210> 230
<211> 6
<212> PRT
<213> Homo sapiens

<400> 230

Gly Val Thr Pro Asp Phe
1 5

<210> 231
<211> 113
<212> PRT
<213> Homo sapiens

<400> 231

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 Arg Ser Ser Gln Ser Leu Val His Ser
20 25 30

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

Pro Arg Arg Leu Ile Tyr Lys Val Ser His Arg 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 Leu Gln Gly
85 90 95

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

Lys

<210> 232
<211> 16
<212> PRT
<213> Homo sapiens

<400> 232

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

<210> 233
<211> 7
<212> PRT
<213> Homo sapiens

<400> 233

Lys Val Ser His Arg Asp Ser
1 5

<210> 234
<211> 10
<212> PRT
<213> Homo sapiens

<400> 234

Leu Gln Gly Thr His Trp Pro Pro Phe Thr
1 5 10

<210> 235
<211> 121
<212> PRT
<213> Homo sapiens

<400> 235

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Asn Pro Gly Gly
1 5 10 15

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

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

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

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


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


Ala Asn Met Leu Ala Ala Ala Gly Ser His Tyr Phe His Tyr Trp Gly
            100                 105                 110


Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210>  236
<211>  5
<212>  PRT
<213>  Homo sapiens

<400>  236

Thr Tyr Ser Met Asn
1               5


<210>  237
<211>  17
<212>  PRT
<213>  Homo sapiens

<400>  237

Leu Ile Thr Ser Ser Gly Ser Tyr Ile Tyr Tyr Ala Asp Ser Val Lys
1               5                   10                  15


Gly



<210>  238
<211>  12
<212>  PRT
<213>  Homo sapiens

<400>  238

Met Leu Ala Ala Ala Gly Ser His Tyr Phe His Tyr
1               5                   10


<210>  239
<211>  112
<212>  PRT
<213>  Homo sapiens

<400>  239

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


Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val His Ser
            20                  25                  30
```

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


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


Asp Arg Phe Ser Gly Ser Gly Ala 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 Met Gln Val
                85                  90                  95


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


<210>  240
<211>  16
<212>  PRT
<213>  Homo sapiens

<400>  240

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


<210>  241
<211>  7
<212>  PRT
<213>  Homo sapiens

<400>  241

Lys Ile Ser Glu Arg Phe Ser
1               5


<210>  242
<211>  9
<212>  PRT
<213>  Homo sapiens

<400>  242

Met Gln Val Thr Gln Phe Pro Ile Thr
1               5


<210>  243
<211>  114
<212>  PRT
<213>  Homo sapiens

<400>  243

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1               5                   10                  15


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


Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
```

```
        35                  40                  45

Ala Val Ile Trp Tyr Asp Gly Ser Lys Lys Tyr Tyr Gly Asp Ser Val
    50                  55                  60

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

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

Val Pro Asp Ala Phe Asp Met Trp Gly Gln Gly Thr Met Val Thr Val
            100                 105                 110

Ser Ser
```

<210> 244
<211> 5
<212> PRT
<213> Homo sapiens

<400> 244

```
Asn Tyr Ala Met His
1               5
```

<210> 245
<211> 17
<212> PRT
<213> Homo sapiens

<400> 245

```
Val Ile Trp Tyr Asp Gly Ser Lys Lys Tyr Tyr Gly Asp Ser Val Lys
1               5                   10                  15

Gly
```

<210> 246
<211> 5
<212> PRT
<213> Homo sapiens

<400> 246

```
Asp Ala Phe Asp Met
1               5
```

<210> 247
<211> 112
<212> PRT
<213> Homo sapiens

<400> 247

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

```
Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val His Thr
            20                  25                  30

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

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

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

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

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


<210>  248
<211>  16
<212>  PRT
<213>  Homo sapiens

<400>  248

Arg Ser Ser Gln Ser Leu Val His Thr Asp Gly Lys Thr Tyr Leu Ser
1               5                   10                  15


<210>  249
<211>  7
<212>  PRT
<213>  Homo sapiens

<400>  249

Lys Met Ser Lys Arg Phe Ser
1               5


<210>  250
<211>  9
<212>  PRT
<213>  Homo sapiens

<400>  250

Leu Gln Leu Thr Gln Phe Pro Ile Thr
1               5


<210>  251
<211>  123
<212>  PRT
<213>  Homo sapiens

<400>  251

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

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

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

Gly Trp Ile Asn Thr Asn Thr Gly Asn Pro Thr Tyr Ala Gln Gly Phe
    50   55   60

Thr 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 Asp Arg Ile Asp Gly Ser Ser Trp Ser Ser Trp Phe Asp Pro
            100   105   110

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

<210> 252
<211> 4
<212> PRT
<213> Homo sapiens

<400> 252

Tyr Ala Met Asn
1

<210> 253
<211> 17
<212> PRT
<213> Homo sapiens

<400> 253

Trp Ile Asn Thr Asn Thr Gly Asn Pro Thr Tyr Ala Gln Gly Phe Thr
1   5   10   15

Gly

<210> 254
<211> 14
<212> PRT
<213> Homo sapiens

<400> 254

Asp Arg Ile Asp Gly Ser Ser Trp Ser Ser Trp Phe Asp Pro
1   5   10

<210> 255
<211> 111
<212> PRT

<213> Homo sapiens

<400> 255

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

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

Tyr Asp Val His Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu
35 40 45

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

Ser Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Thr Gly Leu
65 70 75 80

Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Phe Asp Ser Ser
85 90 95

Leu Ser Ser Ser Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105 110

<210> 256
<211> 14
<212> PRT
<213> Homo sapiens

<400> 256

Thr Gly Ser Ser Ser Asn Ile Gly Ala Gly Tyr Asp Val His
1 5 10

<210> 257
<211> 7
<212> PRT
<213> Homo sapiens

<400> 257

Gly Asn Ser Asn Arg Pro Ser
1 5

<210> 258
<211> 11
<212> PRT
<213> Homo sapiens

<400> 258

Gln Ser Phe Asp Ser Ser Leu Ser Ser Ser Val
1 5 10

<210> 259
<211> 120
<212> PRT
<213> Homo sapiens

<400> 259

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Pro Val Asn Asn Tyr
20 25 30

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

Gly Phe Ile Asn Thr Asn Thr Gly Ile Pro Thr Tyr Ala Gln Gly Phe
50 55 60

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

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

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

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 260
<211> 5
<212> PRT
<213> Homo sapiens

<400> 260

Asn Tyr Ala Ile Asn
1 5

<210> 261
<211> 17
<212> PRT
<213> Homo sapiens

<400> 261

Phe Ile Asn Thr Asn Thr Gly Ile Pro Thr Tyr Ala Gln Gly Phe Thr
1 5 10 15

Gly

<210> 262
<211> 11
<212> PRT
<213> Homo sapiens

<400> 262

Val Gly Ile Val Gly Val Ile Val Phe Asp Tyr

1 5 10

<210> 263
<211> 122
<212> PRT
<213> Homo sapiens

<400> 263

Asp Val 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 Ser Ser
20 25 30

Ser Lys Asn Lys Asn His 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 Tyr
50 55 60

Trp Ala Ser Thr Arg Glu Ser Gly Val Pro Asp Arg Phe Ser Gly Ser
65 70 75 80

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu
85 90 95

Asp Val Ala Val Tyr Tyr Cys Gln Gln Tyr Tyr Ser Pro Ser Val Thr
100 105 110

Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
115 120

<210> 264
<211> 17
<212> PRT
<213> Homo sapiens

<400> 264

Lys Ser Ser Gln Ser Val Leu Ser Ser Ser Lys Asn Lys Asn His Leu
1 5 10 15

Ala

<210> 265
<211> 7
<212> PRT
<213> Homo sapiens

<400> 265

Trp Ala Ser Thr Arg Glu Ser
1 5

<210> 266

<211> 9
<212> PRT
<213> Homo sapiens

<400> 266

Gln Gln Tyr Tyr Ser Pro Ser Val Thr
1 5

<210> 267
<211> 126
<212> PRT
<213> Homo sapiens

<400> 267

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1 5 10 15

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

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

Ala Ile Ile Tyr Tyr Asp Ser Ser Gln Arg Tyr Tyr Ala Asp Ser Val
50 55 60

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

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

Ala Arg Asp Leu Pro Phe His Tyr His Arg Ser Ala Ser Phe Ala Pro
100 105 110

Ser Asp Thr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 268
<211> 5
<212> PRT
<213> Homo sapiens

<400> 268

Ser Tyr Gly Met His
1 5

<210> 269
<211> 17
<212> PRT
<213> Homo sapiens

<400> 269

Ile Ile Tyr Tyr Asp Ser Ser Gln Arg Tyr Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 270
<211> 17
<212> PRT
<213> Homo sapiens

<400> 270

Asp Leu Pro Phe His Tyr His Arg Ser Ala Ser Phe Ala Pro Ser Asp
1 5 10 15

Thr

<210> 271
<211> 108
<212> PRT
<213> Homo sapiens

<400> 271

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

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

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
35 40 45

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

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

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Thr Ser Pro
85 90 95

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

<210> 272
<211> 12
<212> PRT
<213> Homo sapiens

<400> 272

Arg Ala Ser Gln Ala Val Thr Asn Asn Tyr Leu Ala
1 5 10

<210> 273
<211> 7

<212> PRT
<213> Homo sapiens

<400> 273

Ala Ala Ser Ser Arg Ala Thr
1 5

<210> 274
<211> 9
<212> PRT
<213> Homo sapiens

<400> 274

Gln Gln Tyr Gly Thr Ser Pro Ile Thr
1 5

<210> 275
<211> 339
<212> DNA
<213> Homo sapiens

<400> 275
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tcctgtgcag cctctggatt cacctttagt acctattata tgagctgggt ccgccaggct 120

ccaggaaagg ggctggagtg ggtggccaac ataaagcaag atggaagtga gaaatactat 180

gtggactctg tgaagggccg attcaccatc tccagagaca acgccaggaa ctcactgtat 240

ctgcagatgc acagcctgag agccgaggac acggctgtgt attactgtgc gagtcccct 300

gggtggtggg gccagggcac cctggtcacc gtctcctcg 339

<210> 276
<211> 336
<212> DNA
<213> Homo sapiens

<400> 276
gatattgtga tgacccagac tccactctct ctgtccgtca cccctggaca gccggcctcc 60

atctcctgta agtctagtca gagcctcctg catagtgatg gaaagaccta tttgtattgg 120

tacctgcaga agccaggcca gcctccacag ctcctgatct atgaagtttc caaccggttc 180

tctggagtgc cagataggtt cagtggcagc gggtcaggga cagatttcac actgaaaatc 240

agccgggtgg aggctgagga tgttggggtt tattactgca tgcaaagtat acagcttccc 300

gtgactttcg gcggagggac caaggtggag atcaaa 336

<210> 277
<211> 357
<212> DNA
<213> Homo sapiens

<400> 277
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tcctgcaagg cttccggata catcttcacc gactatttta tacactggat aagacaggcc 120

cctggacaag ggcttgagtg gatggggtgg atcaagccta aaagtggtgg cacagactat 180

gcagagaaat ttcagggcag ggtcaccctg actagggaca cgtccatcac cacagtttat 240

atggaattga gcaggctgaa ttctgacgac acggccgtgt attactgtgc gagacttaag 300

tactcagtgc ctgattcaga ttattggggc cagggaaccc tggtcaccgt ctcctcg 357

<210> 278
<211> 336
<212> DNA
<213> Homo sapiens

<400> 278
gatattgtga tgacccagac tccactctct ctgtccgtca cccctggaca gccggcctcc 60

atctcctgta agtctagtca gagcctcctg catagtgatg gaaagaccta tttgtattgg 120

tacctgcaga agccaggcca gcctccacag ctcctgatct atgaagtttc caaccggttc 180

tctggagtgc cagataggtt cagtggcagc gggtcaggga cagatttcac actgaaaatc 240

agccgggtgg aggctgagga tgttggggtt tattactgca tgcaaagtat acagcttccc 300

gtgactttcg gcggagggac caaggtggag atcaaa 336

<210> 279
<211> 378
<212> DNA
<213> Homo sapiens

<400> 279
gaggtgcagc tggtggagtc tgggggaggc ttggtaaagc ctgggggGtc ccttagactc 60

tcctgtgcaa cctctggatt caatttcagt aacgtctgga taagctgggt ccgccaggct 120

ccaggaaagg ggctggagtg ggttggccgt attaaaagca aaaatgatgg tgggacaaca 180

gaatatgctg cacccgtgaa aggcagattc accatctcaa gagatgattc aaaaaatacg 240

gtgtatctcc aaatgaacag cctgaaaacc gaagacgcag gcgtttacta ctgtaccaca 300

gacccgtatc attactttga tatgggggGg cctgggttcg gcccctgggg ccagggcacc 360

ctggtcaccg tctcctcg 378

<210> 280
<211> 339
<212> DNA
<213> Homo sapiens

<400> 280
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atcaactgca agtccggcca gagtgtttta tacaggtcca ataataggaa ctatatagct 120

tggtatcagc agaaaccagg acagcctcct aagttgctca tttactgggc atctacccgg 180

gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240

atcagcagcc tgcaggctga agatgtggca gtttattact gtcaacaata ttatagtaat 300

cgttggacgt tcggccaagg gaccaaggtg gagatcaaa 339

<210> 281
<211> 339

<212> DNA
<213> Homo sapiens

<400> 281
gatattgtga tgactcaatc accagactcc ctggctgtgt ctctgggcga gagggccacc 60

atcaactgca agtccagcca gagtgtttcg tacagctcca acaataagaa cttcttatct 120

tggtaccagc agaaaccagg acagcctcct aagctgctca tttactgggc atctacccgg 180

gaatccgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240

atcagcagcc tgcaggctga agatgtggca gtttattact gtcagcaata ttctagtctc 300

ccgatctcct tcggccaagg gacacgactg gagattaaa 339

<210> 282
<211> 369
<212> DNA
<213> Homo sapiens

<400> 282
gaggtgcagc tgttggagtc tgggggagcc ttggtacagc ctgggggGtc cctgagactc 60

tcctgtgcag cctctggact cacttttagc aggcatgcct ttagttgggt ccgccaggct 120

ccagggaagg ggctggagtg ggtcgcaatt agtagtggta gtgggggtaa cacatactac 180

gcagcctccg tgaagggccg gttcaccatc tccagagacg aatcaaagaa cacgctgtat 240

ctgcaaatga acagtctgag agtcgaggac acggccctgt attactgtgc gaaagaggtc 300

ttggagtggt cattattgag tcgatacatg gacgtctggg gcaaagggac cacggtcacc 360

gtctcctcg 369

<210> 283
<211> 330
<212> DNA
<213> Homo sapiens

<400> 283
cagtctgtgc tgactcagcc accctcagcg tctgggaccc ccgggcagag ggtcaccatc 60

tcttgttctg gaagcagctc caacatcgga ggtaatactg tgaactggta ccaccagctc 120

ccaggaacgg cccccaaact cctcgtctat agtactaatc agcggccctc aggggtccct 180

gaccgattct ctggctccaa gtctggcacc tcagcctccc tggccatcag tgggctccag 240

gctgaggatg aggctgatta ttactgtgca acatgggatg acagcctgaa tggttgggtg 300

ttcggcggag ggaccaagct gaccgtcctg 330

<210> 284
<211> 336
<212> DNA
<213> Homo sapiens

<400> 284
caggtgcagc tgcaggagtc gggcccaggg ctggtgaagc cttcggagac cctgtccctc 60

acctgcactg tctctggtgg ctccatcact gattactact ggagttggat ccggcagccc 120

ccagggaagg gactggagtg gattggctat atccatgaca gtgggaccac caggtacaac 180

ccctccctca cgagtcgact cagcatgtca ttagacacgt ccacgaacca ggtctccctg 240

aggttgacct ctgtgaccgc tgcggacacg gccgtgtatt actgtgcgaa agttcctgac 300

tactggggcc agggcaccct ggtcaccgtc tcctcg 336

<210> 285
<211> 339
<212> DNA
<213> Homo sapiens

<400> 285
gatattgtga tgactcaatc accagactcc ctggctgtgt ctctgggcga gagggccacc 60

atcaactgca agtccagtca gagtgttttg tacaactccg acaataagaa ctacttagct 120

tggttgcagc agaagccagg acagcctcct aaggtcctca tttactgggc atctacccgg 180

gaattcgggg tccctgaccg attcagtggc agcgggtctg ggacagattt cactctcacc 240

atcagcagcc tgcaggctga agatgtggca gtttattact gtcatcaata ttatagtgtt 300

cccttcactt tcggcggagg gaccaaggtg gagatcaaa 339

<210> 286
<211> 348
<212> DNA
<213> Homo sapiens

<400> 286
caggtgcagc tgcaggagtc gggcccagga gtggtgaagc cttcacagac cctgtccctc 60

acctgcactg tctctggtgt ctccgtcggt agtggtgatt actactggag ttggatccgc 120

caccacccag ggaagggcct ggagtggatt ggatacatct ctttttttgg gagttccaat 180

tacaacccgt ccctcaaggg tcgagtttcc atgtcagtag acacgtctaa caaccagttc 240

tccctgaatt tgaagtctgt gactgccgcg gacacggccg tctatttctg tgccacggga 300

aatgcctatt ctttctgggg ccaggggaca atggtcaccg tctcttcg 348

<210> 287
<211> 324
<212> DNA
<213> Homo sapiens

<400> 287
cagtctgccc tgactcagcc tgcctccgtg tcggggtctc ctggacagtc gatcaccatc 60

tcctgcactg gaaccagcag tgatattggg acccataacc ttgtctcctg gtaccaacaa 120

caccccggca aagcccccaa actcatcatt tatgagatct ttgagcggcc ttcagggatt 180

tcttctcgct tcactggctc caagtctggc aacacggcct ccctgacaat ctctgggctc 240

caggctgagg acgaggctga ttatttctgc tgcgcatatt cagttactgt tatattcggc 300

ggagggacca aattgaccgt cctt 324

<210> 288
<211> 336
<212> DNA
<213> Homo sapiens

<400> 288
gaggtgcagc tggtggagtc cgggggagac ctagttcagc ctgggggtc cctgagactc 60

tcctgtacag cctctggatt caacttaggt gactactgga tgcactgggt ccgccaagtt 120

ccagggaagg ggctggtgtg ggtctcacgt attagtagtg atggagcttc tgtaagttac 180

gcggacttcg tggagggccg attcaccatc tccagaggca acgccaggaa tacacttttt 240

ctggaactga acagtctgag actcgacgac acggctgtgt attattgtgc catgggggtg 300

gtctggggcc agggcaccct ggtcaccgtc tcctcg 336

<210> 289
<211> 324
<212> DNA
<213> Homo sapiens

<400> 289
tcctatgagc tgactcagcc accctcggtg tcagtgtccc caggacaaac ggccacgatc 60

tcctgctctg gagatgcatt gccaaaaaga tatgcttatt ggtataagca gaagtcaggc 120

caggtccctg ttctgatcat ctatgaggac aacaaacgac cctccgggat ccctgcgaga 180

ttctctggct ccagctccgg gacaatggcc acattgacta tcactggggc ccaggtggac 240

gatgaagctg actactactg ttactcatca gacaatagtg atacttacag tgtgttcggc 300

ggagggacca agctgaccgt ccta 324

<210> 290
<211> 378
<212> DNA
<213> Homo sapiens

<400> 290
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60

tcctgtgcag cgtccagatt caccttcagt agctatggca tgcactgggt ccgccaggcg 120

ccaggcaagg ggctggagtg ggtggcactt atatactatg atgcgactca aaaatattat 180

gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cgcgctgtat 240

ctgcaaatga ctagcctgag ggccgacgac accgctgtct attactgtgc gagagatctt 300

ccgtatcact atcatagaag tgcctctttc gcacctgcgg acacctgggg ccagggaacc 360

ctggtcaccg tctcctcg 378

<210> 291
<211> 324
<212> DNA
<213> Homo sapiens

<400> 291
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60

ctctcctgca gggccagtca gaccattagc aacaactact tagcctggta ccagcaaaaa 120

cctggccagg ctcccagact cctcgtctat gctgcatcca gcagggccac aggcatccca 180

gacagatttt atggcagtgg gtctggggcg gacttcactc tcaccatcag cagactggag 240

cctgaagatt ttgtagtcta ttactgtcag caatacggta gctcaccgat caccttcggc 300

caagggacac gactggagat taaa 324

<210> 292
<211> 360
<212> DNA
<213> Homo sapiens

<400> 292
gaggtgcagc tgttggagtc tgggggaggc ctggtacagc ctgggggtc cctgagactc 60

tcctgtgcag cctctggatt cacctttagc agctattcca tgagctgggt ccgccaggct 120

cctgggaagg ggctggagtg ggtcgcaact gttggttatg gtggtactat ctactacgcc 180

gactccgtga agggccggtt caccatctcc agagacaatt ccaagaacac gctgtatctg 240

gaaatgaaca gcctgagagc cgaggccacg gccgtatatt actgtgcgaa agcgaactac 300

ggtggtaacc gcttcggttt ggacgtctgg ggccagggga ccacggtcac cgtctcctcg 360

<210> 293
<211> 333
<212> DNA
<213> Homo sapiens

<400> 293
cagtctgccc tgactcagcc tccctccgcg tccgggtctc ctggacagtc agtcaccatc 60

tcctgcactg gaaccagcag tgacgttggt ggttataact atgtctcctg gtaccaacac 120

cagccaggca aagcccccaa actcatgatt tatgaggtca gtaagcggcc ctcaggggtc 180

cctgatcgct tctctggctc caagtctggc aacacggcct ccctgaccgt ctctgggctc 240

caggctgagg atgaggctga ttactattgc agctcatatg caggcagtaa caatttggga 300

gtcttcggaa ctgggaccga ggtcaccgtc cta 333

<210> 294
<211> 360
<212> DNA
<213> Homo sapiens

<400> 294
gaggtgcagc tgttggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60

tcctgtgcag cctctggatt cacctttaga aactatgcca tggcctgggt ccgccaggct 120

ccagggaagg ggctggagtg ggtctcagcc attcctgcta ggggtgataa gacatactac 180

gcagactccg tgaggggccg gttcaccatc tccagagaca tttccaagag cgcactgtat 240

ttgcaaatga acagcctgag agtcgaggac acggccgtat actactgtgc gaaagcccac 300

cacctgtaca acaaaaactt tgactactgg ggccagggaa ccctggtcac cgtctcctcg 360

<210> 295
<211> 312
<212> DNA
<213> Homo sapiens

<400> 295
gaaattgtgc tgactcagtc tccaggcacc ctgtctttgt ctccagggga gacagtcacc 60

ctctcctgta gggccagtca gagtgttagc agcagcaact tagcctggta ccagcagaaa 120

cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180

gacaggttca gtggccgtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240

cctgaagatt ttgcagtgta ttactgtcag cactatggca cttttggcca ggggaccaaa 300

gtggatatca aa 312

<210> 296
<211> 369
<212> DNA
<213> Homo sapiens

<400> 296
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tcctgtgcag cctccggatt cacctttagc acctatgtca tgagctgggt ccgccaggct 120

ccagggaagg ggctggagtg ggtctcagct attagtcgtc gtggtggtag cacatactac 180

gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacactgtat 240

ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagatcgt 300

tggctaactg gaaggacggg gggtgttttt gatatctggg gccaagggac aatggtcacc 360

gtctcttcg 369

<210> 297
<211> 321
<212> DNA
<213> Homo sapiens

<400> 297
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60

atcacttgcc aggcgagtca ggacattagc aactatttaa attggtatca gcagaagcca 120

gggaaagccc ctaagctcct gatctacgat gcatccaatt tggaaacagg ggtcccatca 180

aggttcagtg gaagtggatc tgggacagat tttactttca ccatcagtag cctgcagcct 240

gaagatactg caacatatta ctgtcaacag tatgataatc tcccgctcac tttcggcgga 300

gggaccaagg tggaaatcaa a 321

<210> 298
<211> 360
<212> DNA
<213> Homo sapiens

<400> 298
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tcctgtgcag cctctggata cacctttagc tactatgcca tgagctgggt ccgccaggct 120

ccagggaagg ggctggagtg ggtctcaacc attggtgata gtggttctac cacacactac 180

gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagag cacgctgtat 240

ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaagggactt 300

ggaccagtgg ctgctattgg tgactactgg ggccagggaa ccctggtcac cgtctcctcg 360

<210> 299
<211> 330
<212> DNA
<213> Homo sapiens

<400> 299
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tcttgttctg gaagcagctc caacatcgga agtaataatg tatactggta ccagcagctc 120

ccaggaacgg cccccaaact cctcgtctat aggaataatc agcggccctc aggggtccct 180

gaccgagtct ctggctccaa gtctggctcc tcagcctccc tggccatcag tgggctccgg 240

tccgaggatg aggctgatta ttactgtgca gcatgggatg acagcctgcg tggttatgtc 300

ttcggaactg ggaccaaggt caccgtccta 330

<210> 300
<211> 345
<212> DNA
<213> Homo sapiens

<400> 300
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tcctgtgtag cctctggatt caccttcgat aactatggca tgcactgggt acgccaggct 120

ccaggcaagg ggctggagtg gctggcagtt atatcatatg gtggagatca tcaattctat 180

ggagactccg tgaaggaccg attcaccatc tccagagaca attccaagaa cacagcgtat 240

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tttcagcaga ggccaggcca atctccaagg cgcctaattt ataaggtttc tcaccgggac 180

tctggggtcc cagatagatt cagcggcagt gggtcaggca ctgatttcac actgaaaatc 240

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ccgttcactt ttggccaggg gaccaagctg gagatcaaa 339

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ccagggaagg ggctggagtg ggtctcattg attactagta gtggtagtta catatactac 180

gcagactcag tgaagggccg attcaccatc tccagagacg acgccaagaa ctcactctat 240

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gcagcagctg gtagtcacta ctttcactac tggggccagg gaaccctggt caccgtctcc 360

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cttcagcaga ggccaggcca gcctccaaga ctcctaattt ataagatttc tgaacggttc 180

tctggggtcc cagacagatt cagtggcagt ggggcaggga cagatttcac actgaaaatc 240

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ccaggcaagg ggctggagtg ggtggcagtt atttggtatg atggaagtaa aaaatattat 180

ggcgactccg tgaagggccg attcaccatc tccagagaca atcccaagaa cacgttgtat 240

ctacagatga acagtctgag agtcgaagac acggctatat attactgtgt ccccgacgct 300

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gcttcatcag aggccaggcc agcctccaag acccctaatt tataagatgt ctaagcggtt 180

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ccctggacaa gggcttgagt ggatgggctt catcaacacc aacactggga tccccacgta 180

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gaatccggct actgggcatc tacccgggaa tccggggtcc ctgaccgatt cagtggcagc 240

gggtctggga cagattttac tctcaccatc agcagcctgc aggctgaaga tgtggcagtt 300

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cctggccagg ctcccagact cctcgtctat gctgcatcca gcagggccac tggcatccca 180

gacagattct atggcagtgg gtctggggcg gacttcactc tcaccatcag cagactggag 240

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Asn Gln Ser Gly Pro Ser Gly
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Ser Asn Ala Gly Ser Gly Ser Gly Phe Asn Gly
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Ser Trp Gly Met Met Gly Met Leu Ala Ser Gln
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Lys Ser Gly Gln Ser Val Leu Tyr Arg Ser Asn Asn Arg Asn Tyr Ile
1 5 10 15

Ala

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Trp Ala Ser Thr Arg Glu Ser
1 5

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<400> 328

Gln Gln Tyr Tyr Ser Asn Arg Trp Thr
1 5